Appendix C:
Public Participation Report

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)

March 2025

Report Information

Project:	Environmental Authorisation and Integrated Water Use Licence Application for the Recommissioning of the Withok Tailings Storage Facility (TSF), Ekurhuleni, Gauteng Province.
Report Title:	Public Participation Report
DMRE Reference No:	GP30/5/1/2/2(158) MR
DWS Reference No:	WU38174
Client:	Ergo Mining (Pty) Ltd
Project No:	DRDG#012
Report Date:	February 2025
Status of Report:	**PP Report for Draft EIA / EMPr & Draft IWWMP**

Verification	Capacity	Name	Signature	Date
By Author	Stakeholder Consultant	Vanessa Viljoen		13 February 2025
Reviewed by:	EAP	Gerlinde Wilreker		14 February 2025
Reviewed by:	Legal Review	Michael Hennessy		13 February 2025
Authorised by:	CEO	Bradly Thornton		18 February 2025

Please consider the Environment before you print this document.

Copyright © 2025 Kongiwe Environmental (Pty) Ltd

All rights reserved. Absolutely no part of this report may be reproduced, distributed, or transmitted in any form or by any means, including photocopying, recording, or other electronic or mechanical methods, without the prior written consent of Kongiwe Environmental (Pty) Ltd. All content and methodologies remain intellectual property of Kongiwe Environmental (Pty) Ltd. Where applicable, the contents of this document are confidential and protected by legal privilege and must not be distributed to other parties without prior written permission.

This report is to be used for the sole purpose intended and should not be used for any other purpose without prior written permission.

Kongiwe Environmental (Pty) Ltd.
Registration Number 2016/135562/07
Directors: N Banks, GE Cornish-Bowden, AM Lemon, GL Smith, BJ Thornton
Telephone: +27 (10) 140 6508 / Email: info@kongiwe.com
Registered Address: 150 Bryanston Drive, Bryanston, Sandton, 2191, South Africa.
Mailing Address: PostNet Suite no 163, Private Bag X21, Bryanston, 2021, South Africa.
www.kongiwe.com

© 2025 Kongiwe Environmental (Pty) Ltd

Table of Contents

1 INTRODUCTION 1
2 PUBLIC PARTICIPATION PROCESS 1
2.1 Applicable Legislation 1
2.2 Objectives of the Public Participation Process 2
2.3 Summary of Issues raised by Stakeholders 3
2.4 Public Participation Process Approach 3
2.4.1 Landowner consent 3
2.4.2 Submission of the Environmental Authorisation Application Form and IWULA Registration 3
2.4.3 Pre-Application Meeting with Department Mineral Resources and Energy 4
2.4.4 Pre-application Meeting and Site Visit with the Department of Water and Sanitation 4
2.4.5 Stakeholder Identification and Analysis 5
2.4.6 Land Claims Enquiry 7
2.4.7 Communication and Engagement 8

List of Tables

Table 2-1: Stakeholder Engagement activities 2
Table 2-2: DMRE meeting attendees 4
Table 2-3: DWS Pre-application and Site visit attendees 5
Table 2-4: Stakeholder Meetings 10
Table 2-5: Summary of activities undertaken as part of the Scoping Phase 14
Table 2-6: PPP activities to be undertaken during the Final Scoping Phase 17
Table 2-7: Details of the Stakeholder Meetings 20
Table 2-8: Summary of PPP activities - Draft Environmental Impact Assessment Phase 20
Table 2-9: Summary of the PPP activities - Final EIA phase 22

© 2025 Kongiwe Environmental (Pty) Ltd

List of Appendices

Appendix C1: Stakeholder Database
Appendix C2: Land Claims
Appendix C3: Consultation Materials
Appendix C4: Newspaper Advertisement
Appendix C5: Site Notice
Appendix C6: Correspondence
Appendix C7: Authority Correspondence
Appendix C8: Meeting Minutes
Appendix C9: Comment and Response Report

Abbreviations

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

© 2025 Kongiwe Environmental (Pty) Ltd

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.

Public involvement is a fundamental principle of the Environmental Impact Assessment. The inclusion of the views of the Interested and Affected Parties (I&APs) helps to ensure the decision-making process is equitable and fair and leads to more informed choice and better environmental outcomes.

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 (NEM:WA): 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 Project for the recommissioning of the Withok Tailings Storage Facility.
- Provide stakeholders with the opportunity and information they need to participate meaningfully and 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 is being 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 **Process complete**	❖ Site Visit with DWS; ❖ Identification of stakeholders (WinDeed searches, compilation of stakeholder database); ❖ Consultation with Authorities (including ward councillors) – (One-on-One consultation meetings / Online via Microsoft Teams / Telephonic Discussions); ❖ Compilation of announcement documents (BID, Registration Sheet, Advert, Site notice and DSR notification letter) and providing project information to stakeholders; ❖ Compilation of awareness creation Fact Sheet for GISTM; ❖ Obtaining initial comments and suggestions from stakeholders; and ❖ Land Claims enquiry.
Scoping Phase **Process complete**	❖ Consultations with Directly Affected Landowners (One-on-One consultation meetings / online via Microsoft Teams Meetings); ❖ Distribution and placement of project announcement materials (site notices, newspaper advertisements); ❖ Updating of the stakeholder database; ❖ Availability of the Scoping Report and its non-technical summary for public review and comment;

© 2025 Kongiwe Environmental (Pty) Ltd

Project Phase	Activities to be Undertaken
	❖ Providing stakeholders with further details of the proposed project and associated specialist studies; ❖ Consultations with stakeholders (Open Day & Online Meeting); ❖ Obtaining further comments and suggestions from stakeholders; ❖ Informing specialists and the applicant about comments received from stakeholders, and ❖ Submit Final Scoping Report to relevant competent authorities.
EIA Phase	❖ Provide feedback about the specialist studies conducted and mitigation measures proposed by means of consultation with stakeholders; ❖ Provide opportunity for stakeholders to comment on specialist findings, impacts assessments and recommendations; ❖ Make the relevant environmental reports available for public review and comment; ❖ Consultation with stakeholders (Open Day & Online Meeting); ❖ Verify that comments raised by stakeholder have been accurately recorded; ❖ Inform specialists and the proponent of stakeholders' comments; and ❖ Submit Final Environmental Reports to relevant competent authorities.
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 will be explained.

2.3 Summary of Issues raised by Stakeholders

Comments raised by stakeholders during all phases of the S&EIA will be included in the Comments and Responses Report (CRR) (**Appendix C9**).

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 would be held with the relevant landowners. The main purpose of these discussions would be to request the affected stakeholders to provide consent for Kongiwe to submit the IWULA. Thereafter, the applicant would negotiate the necessary servitudes and rights of way with the affected landowners.

In this case the applicant, Ergo Mining (Pty) Limited (Ergo), is the landowner and consent is not required.

2.4.2 Submission of the Environmental Authorisation Application Form and 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**.

An IWULA will be submitted via the electronic - Water Use Licence Application and Authorisation System (e-WULAAS) once complete. The project has been registered (WU38174) on e-WULAAS and the e-WULAAS process has commenced and is ongoing. The Proposed Project is currently on Phase 1 of the e-WULAAS.

2.4.3 Pre-Application Meeting with Department Mineral Resources and Energy

A in-person meeting was arranged and attended with DMRE officials on **Thursday, 05 September 2024 at DMRE Offices, 222 Smit St, Braamfontein from 10:00-11:00.**

The purpose of the site visit was to:

- Discuss the proposed Withok TSF Recommissioning Project.
- Provide an overview of the Scoping and Environmental Impact Assessment process.
- Provide you with an opportunity to raise comments/seek clarity and provide input.
- Record comments raised and include in the Comments and Responses Report.

Information was presented by means of a PowerPoint presentation. Minutes of the meeting has been compiled and distributed to Mr Nicolas Chavalala, Office of the Regional Manager: Environmental Management. **(Appendix C8)**.

The following stakeholders attended the Meeting:

Table 2-2: DMRE meeting attendees

Organisation	Name of attendee	Designation
Department of Mineral Resources and Energy	Mr Nicolas Chavalala	Regional Manager: Environmental Management
Ergo Mining (Pty) Ltd	Mr Greg Ovens	Project Manager
Ergo Mining (Pty) Ltd	Mr Masala Tshamano	Environmental Manager
Kongiwe Environmental (Pty) Ltd	Ms Gerlinde Wilreker	Project Manager
Kongiwe Environmental (Pty) Ltd	Ms Thuli Phakathi	Stakeholder Engagement
Apologies:		
Department of Mineral Resources and Energy	Mr Musa Mangobe	Assistant Director

2.4.4 Pre-application Meeting and Site Visit with the Department of Water and Sanitation

A pre-application meeting and site visit was arranged and attended with Department of Water and Sanitation (DWS) officials on **Wednesday, 11 September 2024**.

The purpose of the site visit was to:

- Show the overall project site, as well as the location of the existing infrastructure and water uses to the DWS.
- Provide DWS officials with an opportunity to raise comments/seek clarity and provide input.

© 2025 Kongiwe Environmental (Pty) Ltd

- Record comments raised and then include them in the CRR.

Information at the site visit was presented by means of a locality map which showed the affected properties. Minutes of the site visit has been compiled and distributed to the relevant officer, Ms Thabelo Tshipate, a Gauteng regional representative. **(Appendix C8)**.

The following stakeholders attended the Site Visit:

Table 2-3: DWS Pre-application and Site visit attendees

Organisation	Name of attendee	Designation
Department of Water and Sanitation	Ms Thabelo Tshipate	Environmental Officer
Department of Water and Sanitation	Mr Rendani Ndou	Control Environmental Officer
Department of Water and Sanitation	Ms Puseletso Teffo	Candidate Scientific Technician
Department of Water and Sanitation	Mr Khathutshelo Mudau	Environmental Officer
Geo Tail	Mr Guillaume de Swardt	Engineer of Record
Ergo Mining (Pty) Ltd	Mr Simon Makama	Tailings Superintendent
Fraser Alexander	Mr Matimba Baloyi	Senior Superintendent
Fraser Alexander	Mr Ofentse Phete	Tailings Site Manager
Fraser Alexander	Mr Thabiso Mokoatle	Operations Manager
Ergo Mining (Pty) Ltd	Mr Greg Ovens	Project Manager
Ergo Mining (Pty) Ltd	Mr Masala Tshamano	Environmental Manager
Kongiwe Environmental (Pty) Ltd	Ms Phumla Mngwengwe	WULA Consultant
Kongiwe Environmental (Pty) Ltd	Ms Gerlinde Wilreker	Project Manager
Kongiwe Environmental (Pty) Ltd	Ms Anela Fixi	Stakeholder Engagement Consultant
Kongiwe Environmental (Pty) Ltd	Mr Ripfumelo Macevele	Environmental Consultant
No apologies		
N/A		

2.4.5 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 were used as part of the stakeholder identification and analysis process:

- 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;
    - Cllr Daemane Petrus Andile, Ward Councillor: (Ward 99) - Ekurhuleni
    - Cllr Mnguni Nomalanga Annah, Ward Councillor (Ward 112) - Ekurhuleni
    - Cllr Naidoo, Ward Councillor: (Ward 10) - Lesedi
- 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 were conducted in the effort to identify any additional stakeholders.

Identified stakeholders who are affected by or interested 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

Additional stakeholders identified 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;
  - Cllr Naidoo, Ward Councillor: (Ward 10) – Lesedi
  - Cllr M. Myburg, Ward Councillor (Ward 4) - Midvaal
  - Cllr M. Kruger, Ward Councillor (Ward 12) - Midvaal
  - Cllr J. Viljoen, Ward Councillor (Ward 13) - Midvaal
  - Cllr A Dickson, Ward Councillor (Ward 15) - Midvaal
  - Cllr Sidu Nkululeko, Ward Councillor (Ward 45) - Ekurhuleni
  - Cllr Ngubane Sanele Cromwell, Ward Councillor (Ward 61) - Ekurhuleni
  - Cllr Letsoela Thabiso, Ward Councillor (Ward 62) - Ekurhuleni
  - Cllr Motsopi Thekiso Amos, Ward Councillor (Ward 64) - Ekurhuleni
  - Cllr Daemane Petrus Andile, Ward Councillor (Ward 99) - Ekurhuleni
  - Cllr Thobejane Phatudi Alex, Ward Councillor (Ward 108) - Ekurhuleni
- 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 were 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**).

2.4.6 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**).

Feedback was received from DALRRD by means of letters dated **25 October 2024 (Appendix C2)** indicating that there are land claims, but they are not valid.

Ms Edith Mokgoko from DALRRD, clarified that the letter references a challenge to the Amendment Act of 2014 and states that the land claims are considered invalid in view of the finding of the Constitutional Court. **(Appendix C2)**

As a result, the claims were not investigated further to confirm their validity. The claimants listed in the letter are being kept on record until Parliament passes new legislation that allows for the re-opening of land claim submissions.

2.4.7 Communication and Engagement

2.4.7.1 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.
- The Scoping and EIA and the PPP to be undertaken in support of the relevant environmental authorisations/permits and the contact details of the stakeholder engagement consultants.
- Details about how stakeholders can register as an 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 on **Tuesday, 22 October 2024**, when the project was announced **(Appendix C3).** 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 in ***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 co-ordinates of where the site notices were placed are recorded in the site notice report and a site notice map **(Appendix C5).**

Notification Letter with a Registration and Comment Form: An email was sent to stakeholders to inform them about the proposed Project for the recommissioning of the Withok TSF. 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**).

A reminder notification was emailed on **Tuesday, 5 November 2024** to remind stakeholders of the availability of the DSR for public review and comment. The reminder emails also served the purpose of reminding stakeholders to attend the Open Day which was held on **Saturday 9 November 2024 at Tsakane ext. 22 Mega Primary School, 19732 Mashimin St & Shiburi St, Tsakane, Brakpan, 1550 from 09H00-12H00. (Appendix C6).**

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. Comments raised through telephonic discussions are recorded and addressed by the project team (EAP and the relevant specialists).

2.4.7.2 Scoping Phase Consultation

Consultation during the scoping phase was aimed at providing stakeholders with an overview of the proposed project and to obtain comments which informed specialist studies and project planning. Stakeholders were invited to participate through online and in-person engagements depending on preference. The purpose of these meetings was 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 were 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 presented an overview of the proposed Project for the recommissioning of the Withok TSF. Locality, infrastructure and land tenure maps were part of the meetings.

Authority Meetings were held with various Organs of State. The project team presented an overview of the proposed Project for the recommissioning of the Withok TSF. Locality, infrastructure and land tenure maps were part of the meetings.

Landowner Consultation Meetings were held with directly and indirectly affected landowners. The project team presented an overview of the proposed Project for the recommissioning of the Withok TSF. Locality, infrastructure and land tenure maps were part of the meetings.

Online meetings were held with stakeholders who prefer online engagements, and an open day was held with the broader public who prefer a in-person meeting.

Broader Public Consulting meetings: An open day was held with the broader public during the public review period. The purpose of this meeting was to discuss the proposed project, contents of the DSR, and to provide stakeholders with an opportunity to raise their comments and to interact with the project team members.

Refer to Table 2-4 for the stakeholders' meeting schedule.

Table 2-4: Stakeholder Meetings

Proposed dates	Available time slots	Method of Engagement
Online meeting		
Tuesday, 5 November 2024	09H00	Online / Microsoft teams meeting with KlipRivier Forum
Tuesday, 5 November 2024	14H00	Online / Microsoft teams meeting with City of Ekurhuleni Metropolitan Municipality.
Wednesday, 6 November 2024	10H00	Microsoft teams/ scheduled Telephonic discussions
Wednesday, 6 November 2024	12H30	Online / Microsoft teams meeting with Ward Councillor from Ward 99
Thursday, 7 November 2024	09H00	Online / Microsoft teams meeting with Blesbokspruit Forum
Thursday, 7 November 2024	14H00	Online / Microsoft teams meeting with Department of Public Works and Infrastructure (DPWI)
Tuesday, 12 November 2024	14:30	Online / Microsoft teams meeting with FSE
In-person meeting: Open Day		
Saturday, 9 November 2024	09H00 – 10H00	Open Day: Tsakane ext. 22 Mega Primary School 19732 Mashimin St & Shiburi St, Tsakane, Brakpan, 1550
	10H00 – 11H00	
	11H00 – 12H00	

Focused efforts were made to engage with directly impacted stakeholders (those residents in the proposed project area) including vulnerable groups at local level. These individuals were consulted directly and via their representatives and other influential people within communities. Meetings were held in a culturally appropriate manner, allowing stakeholders to voice their concerns openly. All affected communities and groups were made aware of the project feedback.

© 2025 Kongiwe Environmental (Pty) Ltd

Stakeholders were given the option to raise issues in the language of their choice and where translation was required, it was provided. The following languages were used English, Afrikaans, Zulu and Sotho.

Stakeholder meetings were accessible, and adequate notice was 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/WhatsApp.

Refer to **(Appendix C8)** for a list of all the above meetings and consultations that were undertaken. Minutes of these meetings and the presentations were compiled and have been distributed to all stakeholders who attended (**Appendix C8).**

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

Open Day: An open day was held on **Saturday, 9 November 2024 at 09H00-12H00** at **open day: Tsakane ext. 22 Mega Primary School 19732 Mashimin St & Shiburi St, Tsakane, Brakpan, 1550.** The purpose of the open day was 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. Posters with information regarding the proposed project description, locality, infrastructure and the Land Tenure maps were displayed. Copies of the non-technical summary were also distributed to stakeholders who attended. The non-technical summaries were available in English (**Appendix C3)**.





© 2025 Kongiwe Environmental (Pty) Ltd



Figure 2-1: Photos from the Open Day held on Saturday, 9 November 2024

2.4.7.3 Availability of Reports for Public Review and Comment

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

The DSR was made available as follows:

- Copies of the DSR were made available for public review and comment on the following website: Kongiwe's website: https://kongiwe.com/projects/
- A hard copy of the DSR was made available at the following public places as indicted in the table below:

Location	Physical Adress	Contact Person
Public Libraries (Scoping Report):		
Brakpan Public Library	Escombe St, Brakpan, 1541	Mr Vincent Moabelo, Libarian (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 was 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 were distributed at the open day that was held. If required, an electronic copy of the reports was made available upon a request directed to the stakeholder engagement team.

A hard copy of the DSR non-technical summary was available at the following public place as indicated in the table below:

Location	Physical Adress	Contact Person
Public Libraries (non-technical summary):		
Vosloorus Public Library	6125 MC Botha Dr, Vosloorus Ext 1, Vosloorus, 1475	Ms Jane Ntsndeni, Librarian (011) 999 5937 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, Meyerton, 1960	Ms Prudence Matitwana (061) 360 7443 Mon-Fri: 9:00am – 5:00pm / Sat: 9:00am-12:00pm

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 were delivered to the DMRE on **Thursday, 24 October 2024**. Key Commenting Authorities received an email with a website link to where they could download the DSR **(Appendix C6).**

Table 2-5 below provides a summary of the stakeholder engagement activities that formed part of the Draft Scoping Phase.

© 2025 Kongiwe Environmental (Pty) Ltd

Table 2-5: Summary of activities undertaken as part of the Scoping Phase

Activity	Details	Reference in Draft Scoping Report
Stakeholder identification and analysis	Stakeholders were identified by means of WinDeed searches, stakeholder networking and research for the compilation of a stakeholder database. The database has been updated with new I&APs who formally registered and attended stakeholder meetings or submitted comments.	**Appendix C1** Stakeholder database
Identification of land claims	A formal Letter of enquiry was compiled and sent to the Land Claims Commission, Mr Solomon Maruma from the Gauteng Department of Agriculture, Land Reform and Rural Development (DALRRD), Office of the Regional Land Claims Commissioner: Gauteng Province on 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). Feedback was received from DALRRD by means of letters dated 25 October 2024 (Appendix C2) indicating that there are land claims, but they are not valid. Ms Edith Mokgoko from DALRRD clarified that the letter references a challenge to the Amendment Act of 2014 and states that the land claims are considered invalid in view of the finding of the Constitutional Court. Accordingly, the claims were not investigated further to confirm their validity. The claimants listed in the letter are being kept on record until Parliament passes new legislation that allows for the re-opening of land claim submissions.	**Appendix C2** Land claims enquiry letter and correspondence from the GDALRRD.
Distribution of Background Information Document	The BID was compiled and distributed to all stakeholders on the database. The BID was available on the following website: Kongiwe's website: https://kongiwe.com/projects/	**Appendix C3** BIDs
Distribution of GISTM Fact Sheet	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 was available on Kongiwe's website: https://kongiwe.com/projects/	**Appendix C3** GISTM Fact Sheet
Placement of newspaper advertisements	Newspaper adverts were placed in the **Ekurhuleni News**, on **Thursday, 24 October 2024,** and in **The Star, on Tuesday, 22 October 2024.**	**Appendix C4** Newspaper advertisements

© 2025 Kongiwe Environmental (Pty) Ltd

Activity	Details	Reference in Draft Scoping Report
Placement of site notices	Site notices were placed at publicly accessible places within proximity of the project. Copies of the Site Notices were placed at the following public places: ❖ Brakpan Public Library ❖ Tsakane Public Library ❖ Vosloorus Public Library ❖ Katlehong Public Library ❖ Zonkizizwe Public Library ❖ Randvaal Public Library ❖ Henley on Klip Public Library ❖ Meyerton Public Library A site notice placement report and map have been developed, indicting the exact locations of where the site notices were placed, with photos and GPS co-ordinates.	**Appendix C5** Site notice report and placement map
Announcement of the project and the availability of the Draft Scoping Report **DSR Non-technical Summary**	The announcement letter was distributed to stakeholders to: ❖ Announce availability of the Draft Scoping Report; ❖ Invite stakeholders to the Open Day; ❖ Indicate where the Scoping Report was available for public review and comment. The Draft Scoping Report were available on the following website: Kongiwe's website: https://kongiwe.com/projects/ A copy of the DSR and non-technical summaries were placed in the following public place: **Public Libraries (Scoping Report):** ❖ Brakpan Public Library ❖ Tsakane Public Library **Public Libraries (non-technical summary):** ❖ Vosloorus Public Library ❖ Katlehong Public Library ❖ Zonkizizwe Public Library ❖ Randvaal Public Library ❖ Henley on Klip Public Library ❖ Meyerton Public Library	**Appendix C6** Announcement Correspondence **Appendix C3** BID
Stakeholder meetings	Consultation meetings were aimed at engaging with key stakeholders regarding the proposed project to obtain initial comments which will inform specialist studies and	**Appendix C8**

Activity	Details	Reference in Draft Scoping Report
	project planning. The project team presented an overview of the proposed recommissioning of the Withok TSF project. Locality, infrastructure and land tenure maps were part of the meetings. Stakeholders were invited to participate through online and in-person engagements Consultation meetings with authorities, directly and indirectly affected landowners was held via online forums such as Microsoft Teams, or telephonically or in-person depending on preference.	List of meetings & Meeting Minutes **Appendix C9** Comment and Response Report
Broader Public Consulting meetings: **Scoping Phase**	Stakeholders were invited to participate through online and in-person engagements. Consultation meetings were held via online forums such as Microsoft Teams, and an open day wase held with the broader public. The purpose of these meetings was to discuss the proposed project, contents of the DSR, and to provide stakeholders with an opportunity to raise their comments and to interact with the project team members. The following meetings were held: **In-person Meeting:** ❖ An open day was held on **Saturday, 9 November 2024 from 09H00 – 12H00** at Tsakane ext. 22 Mega Primary School, 19732 Mashimin St & Shiburi St, Tsakane, Brakpan, 1550 **Online Meeting:** ❖ **Wednesday, 6 November 2024 from 10H00-11H00** on Microsoft Teams/scheduled Telephonic discussions. Minutes of these meetings were compiled and distributed to everyone who attended these meetings. Comments raised from the meetings have been included in the CRR.	**Appendix C8** List of meetings & Meeting Minutes **Appendix C9** Comment and Response Report

2.4.7.4 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 2-6: PPP activities to be undertaken during the Final Scoping Phase

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

2.4.7.5 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.

2.4.7.6 Public Participation Materials: EIA phase

Notification Letter: A letter **(Appendix C6)** which provides details about the availability of the DEIR/EMPr and the IWWMP for public review and comment and an invitation to online and in-person engagements was sent by email to the full stakeholder database on **Friday, 14 March 2025**.

Newspaper advertisements: A newspaper advert (**Appendix C4**) was placed in ***the Ekurhuleni News, on Thursday, 20 March 2025, and in The Star, on Tuesday, 18 March 2025***. The advertisement provided details about the public review period for the Draft EIR/EMPr and the Draft IWWMP and how the public can access the draft reports for their review and comment. The advert provided information about the online and in-person engagements.

Telephonic discussions: Stakeholders will be consulted by means of telephonic discussions. These discussions facilitate the process of inviting stakeholders to online and in-person engagements and provide stakeholders with a platform to raise issues of concern and suggestions regarding the draft reports. Comments raised through telephonic discussions will be recorded and addressed by the project team (EAP and the relevant specialists).

Maps: Various maps which are part of the Draft EIR/EMPr and the Draft IWWMP will be on display during online and non-virtual engagements.

© 2025 Kongiwe Environmental (Pty) Ltd

Posters: Posters will be developed and used at the online and in-person engagements. The following aspects will be covered in the poster presentation below:

- Project Overview;
- EIA process and legislative timeframes;
- Specialist findings, impacts and proposed mitigation measures; and
- PPP undertaken to date and next steps.

2.4.7.7 Availability of the Draft Environmental Impact Assessment Report / Environmental Management Programme and the Draft IWWMP for public review and comment

The Draft EIA/EMPr report has been compiled and will be made available for a 30-day public review and comment period from **Thursday, 20 March 2025 until Tuesday, 22 April 2025**.

The Draft Integrated Water and Waste Management Plan (IWWMP) report will be made available for a 60-day public review and comment period from **Thursday, 20 March 2025 until Friday, 23 May 2025**.

The Draft EIA/EMPr and the Draft IWWMP will be made available as follows:

- Copies of the non-executive summary of the DEIR/EMPR will be distributed to all stakeholders on the database.
- Copies of the DEIA/EMPR and Draft IWWMP 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 reports will be made available at the following public places:

Location	Physical Adress	Contact Person
Brakpan Public Library	Escombe St, Brakpan, 1541	Mr Vincent Moabelo, Libarian (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 copies of the DEIR 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 Adress	Contact Person
Public Libraries within the Withok Zone of Influence (non-technical summary):		
Vosloorus Public Library	6125 MC Botha Dr, Vosloorus Ext 1, Vosloorus, 1475	Ms Jane Ntsndeni, Librarian (011) 999 5937, 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, Meyerton, 1960	Ms Prudence Matitwana (061) 360 7443 Mon-Fri: 9:00am – 5:00pm / Sat: 9:00am-12:00pm

The Draft EIA/EMPr and appendices were delivered to the DMRE which is the Competent Authority on Wednesday, 19 March 2025.

Key Commenting Authorities will receive an email with a website link to where they can download the Draft EIA/EMPr **(Appendix C6).**

2.4.7.8 EIA Phase Consultation

Stakeholder engagement meetings

Stakeholders are invited to participate through online and in-person engagements. Consultation meetings will be held using platforms like Microsoft Teams, telephonic discussions, and an Open Day.

The purpose of these Stakeholder Meetings is to discuss the Draft EIA/EMPr and the Draft IWWMP, present findings from the specialist studies, provide stakeholders with a platform to raise comments/concerns on the Draft EIA/EMPr and the Draft IWWMP reports and interact with the project team. Posters with information regarding the proposed project description, findings from the specialist studies, impacts and proposed mitigation measures will be displayed, these posters will include various maps of the affected areas. Copies of the non-technical summary will be distributed to stakeholders who attended. The non-technical summaries will be available in English. Minutes of the open day and the presentation as well as the posters will be compiled and distributed to all stakeholders who attended.

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

Table 2-7: Details of the Stakeholder Meetings

Proposed dates	Available time slot	Method of Engagement
Online meeting:		
Wednesday, 26 March 2025	10H00 – 11H00	Online / Microsoft teams
In-person meeting (Open Day)		
Saturday, 29 March 2025	09H00 - 11H00	Tsakane ext. 22 Mega Primary School 19732 Mashimin St & Shiburi St, Tsakane, Brakpan, 1550

Focused efforts will be made to engage with directly impacted stakeholders, including vulnerable groups at local level. These individuals will be consulted directly and via their representatives, and other influential people within communities. Meetings will be held in a culturally appropriate manner, allowing stakeholders to voice their opinions and/or concerns openly. 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.

Extensive mobilisation of stakeholders will be done for National, Provincial, and Local Authorities, Environmental Groups, Landowners / Land occupiers and Community members to promote attendance. Mobilisation of stakeholders was done by means of telephonic consultation, distribution of emails and Short Message Services (SMS/WhatsApp).

Table 2-8 below provides a summary of the stakeholder engagement activities that formed part of the Draft Environmental Impact Assessment Phase.

Table 2-8: Summary of PPP activities - Draft Environmental Impact Assessment Phase

Impact Assessment Phase		
Activity	**Details**	**Reference in DEIR/EMPr**
Announcement of the availability of the Draft EIA/EMPr/IWWMP Reports	A Notification letter which provides details about the availability of the Draft EIR/EMPr and the Draft IWWMP for public review and comment and an invitation to online and in-person engagements will be emailed to the full stakeholder database.	Appendix C6 Announcement Letter
Placement of media advertisement for the EIA Phase	Newspaper advert will be placed in **the Ekurhuleni News, on Thursday, 20 March 2025, and in The Star, on Tuesday, 18 March 2025**. The advertisement provided details about the public review period for the Draft EIR/EMPr and the Draft IWWMP and how the public can access the draft reports for their review and comment. The advert also provided information about online and in-person engagements.	Appendix C4 Advertisements
Placement of Draft EIA/EMPr/IWWMP Reports for public review and comment	The Draft EIA/EMPr reports have been compiled and will be made available for a 30-day public review and comment period and the Draft IWWMP report will be made available for a 60-day public review and comment	-

© 2025 Kongiwe Environmental (Pty) Ltd

Impact Assessment Phase		
Activity	**Details**	**Reference in DEIR/EMPr**
	period from. Copies of the abovementioned reports will be available on the following websites: ❖ Kongiwe's website: https://kongiwe.com/projects/ The announcement letter will be distributed to stakeholders to: ❖ Announce availability of the Draft EIR/EMPr and the Draft IWWMP; ❖ Invite stakeholders to the Open Day; ❖ Indicate where the Draft EIR/EMPr and the Draft IWWMP is available for public review and comment. A copy of the Draft EIR/EMPr and the Draft IWWMP and non-technical summaries will be placed in the following public place: **Public Libraries (Draft EIR/EMPr and the Draft IWWMP):** ❖ Brakpan Public Library ❖ Tsakane Public Library **Public Libraries (non-technical summary):** ❖ Vosloorus Public Library ❖ Katlehong Public Library ❖ Zonkizizwe Public Library ❖ Randvaal Public Library ❖ Henley on Klip Public Library ❖ Meyerton Public Library A copy of the Draft EIR/EMPr and the Draft IWWMP will also be made available at the Stakeholder Meetings. Copies of the Draft EIR/EMPr and the Draft IWWMP will be sent to the DMRE and DWS and various Commenting Authorities for review and comment.	
Broader Public Consulting meetings: **EIA Phase**	Stakeholders are invited to participate through online and in-person engagements. Consultation meetings will be held via online forums such as Microsoft Teams, and an Open day will be held with the broader public. The purpose of these Stakeholder Meetings is to discuss the Draft EIA/EMPr and the Draft IWWMP, present findings from the specialist studies, provide stakeholders	Appendix C9 Comment and Response Report

Impact Assessment Phase		
Activity	**Details**	**Reference in DEIR/EMPr**
	with a platform to raise comments/concerns on the Draft EIA/EMPr and the Draft IWWMP reports and also interact with the project team. The following meetings will be held: **In-person Meeting:** ❖ An open day will be held on **Saturday, 29 March 2025 from 09H00 – 11H00** at Tsakane ext. 22 Mega Primary School, 19732 Mashimin St & Shiburi St, Tsakane, Brakpan, 1550 **Online Meeting:** ❖ **Wednesday, 26 March 2025 from 10H00-11H00** on Microsoft Teams/scheduled Telephonic discussions. Minutes of these meetings will be compiled and distributed to everyone who attended these meetings. All comments raised by stakeholders during these meetings will be captured into the (CRR). Responses to comments are provided in line with the overall project scope and available information.	

2.4.7.9 Availability of the Final Environmental Impact Assessment Report / Final Environmental Management Programme (Final EIR/EMPr) and the Draft IWWMP.

Stakeholders will be notified of the availability of the Final EIR / EMPr and the Final IWWMP reports for review by the CA's.

Table 2-9: Summary of the PPP activities - Final EIA phase

Activity	Details
Announcement of the Final EIR/EMPr /IWWMP	Notification letter notifying stakeholders about the availability of the of the Final EIR/ EMPr and the Final IWWMP for comment will be emailed to the full stakeholder database. 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.
Placement of of the Final EIR / EMPr /IWWMP	The Final EIR / EMPr and the Final IWWMP will be available as follows: ❖ Copies of the Final EIR / EMPr and the Final IWWMP will be available on the following website: o Kongiwe's website: https://kongiwe.com/projects/

Activity	Details
Submission to the Authorities	The Final EIR/EMPr will be submitted to the DMRE and key Commenting Authorities.
Submission to the Authorities	The Final IWWMP will be submitted to the DWS.

2.4.7.10 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.

© 2025 Kongiwe Environmental (Pty) Ltd

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
Draft EIA/EMPr

Stakeholder Database

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Agricultural Union	AFGRI SA	Mr	Ernest	Botha	Afgri-Attorney	Gauteng
Agricultural Union	AFGRI SA	Mr	Johan	Smuts	Legal Representative (Afgri)	Gauteng
Agricultural Union	AFGRI SA	Ms	Nadia	Hetzel	Legal Representative (Afgri)	Gauteng
Agricultural Union	AFGRI SA (Gauteng)	Mrs	Lynette	Du Plessis	TAU SA Central Region	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	Transvaal Agricultural Union of South Africa (TAUSA)	Mr	Henry	Geldenhuys	President	Gauteng
Business & Commerce	Eskom	Mr	Jason	Kasper	Land and Rights Manager	Gauteng
Business & Commerce	Eskom	Mr	Luvuyo	Diniso	W/L Allocations	Gauteng

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Business & Commerce	Eskom	Mr	Moitheri	Khuphane	Ekurhuleni Environmental	Gauteng
Business & Commerce	Eskom	Mr	Sbu	Nkalanga	Ekurhuleni Representative	Gauteng
Business & Commerce	Eskom	Ms	Charmaine	Mare	Eskom Enviro. Manager	Gauteng
Business & Commerce	Eskom	Ms	Nkateko	Msimango	Ekurhuleni Environmental	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	Johannesburg Chamber of Commerce & Industry	Ms	Bernadette	Zerler	Chief Executive	Gauteng
Business & Commerce	Passenger Rail Agency of South Africa (PRASA)	Ms	Nosizwe Nokwe	Macamo	Chairperson: Gauteng Rep	Gauteng
Business & Commerce	Passenger Rail Agency of South African (PRASA)	Mr	Siphiwe	Mathobela	General Manager	Gauteng
Business & Commerce	South African National Road Agency (SANRAL)	Ms	SANRAL	SANRAL	Central Environmental Department email	Gauteng
Business & Commerce	South African National Roads Agency Limited (SANRAL)	Ms	Ria	Barkhuizen	Environmentalist (NR)	Gauteng
Business & Commerce	South African National Roads Agency Limited (SANRAL)	Ms	Victoria	Bota	Environmentalist (Gauteng Region)	Gauteng

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Business & Commerce	Transnet Freight Rail	Mr	Xolisa	Kilani	Technical Engineer	Gauteng
Business & Commerce	Transnet Freight Rail Ltd (JHB)	Ms	Banzi	Mlungu		Gauteng
Business & Commerce	Transnet Ltd	Ms	Nsumbulana	Mtsenga	Engineering Technicians	Gauteng
Business & Commerce	Transnet Ltd Gauteng	Ms	Suzan	Aidelomo	Gauteng Environmental Specialist	Gauteng
Business & Commerce, ZoI_to Joan Road	South African National Road Agency Limited (SANRAL)	Mr	David	Thubane	Land Acquisition Specialist	Gauteng
Business & Commerce, ZoI_to Joan Road	Transnet Freight Rail Ltd (JHB)	Mr	Thembinkosi	Memela	Property Technician	Gauteng
Business & Commerce, Environmental NGO's	Andrew Barker Development Consultant/ KlipSA	Mr	Andrew	Barker	Development Consultant	Gauteng
Catchment Forum, National Government, Withok ZoI	Department of Water and Sanitation (DWS)	Mr	Mogale	Matseba	Manager: Water Resource Planning and Management	Gauteng
Community Member	Agriculture	Mr	Isiya	Rapetswa	Community Member	Gauteng
Community Member	Agricuter Yende	Mr	Aron N	Mdlalose	Community Member	Gauteng
Community Member	Basunro Trading & Projects	Mr	Kgabo	Molefe	Community Member	Gauteng
Community Member	Community Leader	Mr	Sabata	Hloai	Ward 99	Gauteng

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Community Member	Community Member	Mr	Bafana	Maseko		Gauteng
Community Member	Community Member	Mr	Bhekisisa	Mtshali	Ward 99	Gauteng
Community Member	Community Member	Mr	Bhekumuzi	Vilakazi		Gauteng
Community Member	Community Member	Mr	Bhutana	Soko	Ward 99	Gauteng
Community Member	Community Member	Mr	Christopher	Masenya	Ext 1: Ward 99	Gauteng
Community Member	Community Member	Mr	David	Thebe	Ward 99	Gauteng
Community Member	Community Member	Mr	Dennis	Ngidi		Gauteng
Community Member	Community Member	Mr	Fanie	Mathumetse		Gauteng
Community Member	Community Member	Mr	Floyd	Sibanyoni		Gauteng
Community Member	Community Member	Mr	Gani	Tshabalala	Ward 85	Gauteng
Community Member	Community Member	Mr	Happy	Xaba		Gauteng
Community Member	Community Member	Mr	Jabulani	Shongwe	Ward 99	Gauteng

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Community Member	Community Member	Mr	James	Thauthau		Gauteng
Community Member	Community Member	Mr	Jerry	Malinga	Ward 99	Gauteng
Community Member	Community Member	Mr	Joshua	Mashologu		Gauteng
Community Member	Community Member	Mr	Kabelo	Radingwana	Ward 99	Gauteng
Community Member	Community Member	Mr	Kaface	Thusini	Ward 99	Gauteng
Community Member	Community Member	Mr	Kamogelo	Mphuthi	Ward 99	Gauteng
Community Member	Community Member	Mr	King	Khosa	Ward 99	Gauteng
Community Member	Community Member	Mr	Lucas	Mogakabe	Ward 99	Gauteng
Community Member	Community Member	Mr	Luvo	Tyokolo	Ward 99	Gauteng
Community Member	Community Member	Mr	Mafatlha	Tshegofatso	Ward 99	Gauteng
Community Member	Community Member	Mr	Mcebisi	Mteto	Ext 22: Ward 99	Gauteng
Community Member	Community Member	Mr	Mfanakayise	Mkhwanazi	Ext 22: Ward 99	Gauteng

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Community Member	Community Member	Mr	Mncedi	Nxadi	Ward 82	Gauteng
Community Member	Community Member	Mr	Njabulo	Mngomezulu	Ward 99	Gauteng
Community Member	Community Member	Mr	Nkoko	Bane	Ward 99	Gauteng
Community Member	Community Member	Mr	Norman	Khambule	Ward 99	Gauteng
Community Member	Community Member	Mr	Petros	Madingwane		Gauteng
Community Member	Community Member	Mr	Radile	Mawitla	Ward 112	Gauteng
Community Member	Community Member	Mr	Sakhile	Nene	Ward 99	Gauteng
Community Member	Community Member	Mr	Sandile Sydwell	Motha		Gauteng
Community Member	Community Member	Mr	Sibusiso	van der Merwe		Gauteng
Community Member	Community Member	Mr	Sibusiso	Nhlapo	Ward 112	Gauteng
Community Member	Community Member	Mr	Sihle	Mfisi	Ext 8: Ward 112	Gauteng
Community Member	Community Member	Mr	Siyabonga	Vilakazi	Ward 112	Gauteng

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Community Member	Community Member	Mr	Sizwe	Mthembu	Ward 99	Gauteng
Community Member	Community Member	Mr	Skhumbuzo	Matontsi	Ward 99	Gauteng
Community Member	Community Member	Mr	Smangaliso	Khumalo	Resident: Ext 8	Gauteng
Community Member	Community Member	Mr	Tebogo Peter	Msibi	Ward 99	Gauteng
Community Member	Community Member	Mr	Thapelo	Mphelane	Ext 8	Gauteng
Community Member	Community Member	Mr	Thapelo	Nyembe	Ward 99	Gauteng
Community Member	Community Member	Mr	Thozama	Dadafe		Gauteng
Community Member	Community Member	Mr	Thulani	Kgomo	Ward 99	Gauteng
Community Member	Community Member	Mr	Thulani	Hlauze	Ward 112	Gauteng
Community Member	Community Member	Mr	Timothy	Mahlobane		Gauteng
Community Member	Community Member	Mr	Vusimuzi	Sibeko		Gauteng
Community Member	Community Member	Mr	Zamokuhle	Chama		Gauteng

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Community Member	Community Member	Mr	Zwelithini	Madlala		Gauteng
Community Member	Community Member	Ms		Victora	Community Member: Ward 112	Gauteng
Community Member	Community Member	Ms	Amukelani	Sithole	Ward 112	Gauteng
Community Member	Community Member	Ms	Anitta	Mashele		Gauteng
Community Member	Community Member	Ms	Ayanda	Sithole		Gauteng
Community Member	Community Member	Ms	Constance	Mahlalela	Ward 99	Gauteng
Community Member	Community Member	Ms	Duduzile	Ndimande	Ward 99	Gauteng
Community Member	Community Member	Ms	Happy	Mashele	Ward 99	Gauteng
Community Member	Community Member	Ms	Kate	Teme	Ward 112	Gauteng
Community Member	Community Member	Ms	Lindiwe Gertrude	Mashiane	Ward 99	Gauteng
Community Member	Community Member	Ms	Lorraine	Mathumetse		Gauteng
Community Member	Community Member	Ms	Matshidi	Ntsele		Gauteng

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Community Member	Community Member	Ms	Mpho	Sekonyela	Ward 99	Gauteng
Community Member	Community Member	Ms	Nhlanhla	Mashele	Ward 99	Gauteng
Community Member	Community Member	Ms	Nomthandazo	Mhlanga	Ward 99	Gauteng
Community Member	Community Member	Ms	Nonhlanhla	Mthembu	Ward 99	Gauteng
Community Member	Community Member	Ms	Nqobile	Skhosana	Ward 99	Gauteng
Community Member	Community Member	Ms	Nthabiseng	Thobakgale	Ward 99	Gauteng
Community Member	Community Member	Ms	Ntokozo	Maila	Ward 99	Gauteng
Community Member	Community Member	Ms	Ntombizodwa Suzan	Nkwakwa	Ward 70	Gauteng
Community Member	Community Member	Ms	Phindi	Manana	Ext 22: Ward 99	Gauteng
Community Member	Community Member	Ms	Precious	Nene	Ward 112	Gauteng
Community Member	Community Member	Ms	Priscilla	Swart	Ext 8	Gauteng
Community Member	Community Member	Ms	Refiloe	Mbatha	Ward 99	Gauteng

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Community Member	Community Member	Ms	Sibongile Joy	Ndala	Ext 22: Ward 99	Gauteng
Community Member	Community Member	Ms	Siphesihle	Ndebele	Ward 99	Gauteng
Community Member	Community Member	Ms	Thabile	Tyokolo	Ward 99	Gauteng
Community Member	Community Member	Ms	Vanessa	Malindisa	Resident: Ext 8	Gauteng
Community Member	Community Member	Ms	Victoria	Makgalenyana	Ward 112	Gauteng
Community Member	Community Member	Ms	Wanda	Buqindlela		Gauteng
Community Member	Community Member	Ms	Yonela	Tyokolo	Ward 99	Gauteng
Community Member	Ekhaya Kwamshengu Tshabalala	Mr	Bongani	Mbele	Community Member	Gauteng
Community Member	Eyasemade Kani Projects	Ms	Lindiwe	Mtshali	Community Member	Gauteng
Community Member	Hlenga Construction	Mr	Sabelo	Mbele	Community Member	Gauteng
Community Member	Ituphephe Project	Mr	Phephelaphi	Tshabalala	Community Member:	Gauteng
Community Member	Khula Khanye NPC	Mr	Prince	Tamane	Community Member	Gauteng

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Community Member	Mkhahleni	Mr	Bheki	Ngcobo	Manager: Community Member	Gauteng
Community Member	Mpembematima Projects and Security Pty Ltd	Mr	Thuso	Buthelezi	Community Member	Gauteng
Community Member	Nkazimulo Construction and Properties (Pty) Ltd	Mr	Mswazi	Mabele	Director: Community Member	Gauteng
Community Member	Nozuko Bumos Platinum (Pty) Ltd	Ms	Nozuko	Lusiki	Director: Community Member	Gauteng
Community Member	Radebe and Mabaso Mining Holdings	Mr	Elphas	Radebe	Director: Community Member	Gauteng
Community Member	Sindi and Dumi Construction	Mr	Albert	Mtshali	Community Member	Gauteng
Community Member	Siyanqoba Construction	Ms	Zama	Khuma	Community Member	Gauteng
Community Member	Thulinyalailo Sewo	Ms	Nokuthula	Tamite	Director: Community Member	Gauteng
Community Member	Xhamela and Sons Holdings	Mr	Bongani	Daemane	Ward 99	Gauteng
Community Member	Xolibongicebo Holdings	Ms	Sibongile	Dludlu	Ward 99	Gauteng
Directly Affected Landowner, ZoI_to Joan Road	Ekurhuleni Water Care Company (ERWAT)	Mr	Aubrey	Theko		Gauteng
Directly Affected Landowner, ZoI_to Joan Road	Ekurhuleni Water Care Company (ERWAT)	Mr	Livhuwani	Mathomu	DD6 District Manager	Gauteng

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Directly Affected Landowner, ZoI_to Joan Road	Ekurhuleni Water Care Company (ERWAT)	Mr	Siphiwo	Ngqeza	Manager: Safety, Health and Environment	Gauteng
Directly Affected Landowner, ZoI_to Joan Road	Ekurhuleni Water Care Company (ERWAT)	Ms	Manelisi	Mqoqi	Waterval Plant Manager	Gauteng
Directly Affected Landowner, ZoI_to Joan Road	Ekurhuleni Water Care Company (ERWAT)	Ms	Ntokozo	Makhaya	Environmental Officer	Gauteng
Directly Affected Landowner, ZoI_Joan Road to Vaal River	eNkandla Picnic and Function Venue	Mr	Sbu	Ngwenya		Gauteng
Directly Affected Landowner, ZoI_Joan Road to Vaal River	Manzini Primary School		Manzini	Primary School		Gauteng
Directly Affected Landowner, ZoI_Joan Road to Vaal River	The Purple Horse	Ms	Christine	Sinden	Landowner	Gauteng
Directly Affected Landowner, ZoI_Joan Road to Vaal River	The Potted Olive Edible Garden Centre	Mr	Jamie	Shepherd	Landowner	Gauteng
Directly Affected Landowner, ZoI_Joan Road to Vaal River	Glen Douglas Dolomite Pty Ltd	Ms	Kalay	Naidoo	Landowner	Gauteng
Directly Affected Landowner, ZoI_Joan Road to Vaal River	Harvest Fresh Farms Pty Ltd	Mr	George	Maxed	Director	Gauteng
Directly Affected Landowner, ZoI_Joan Road to Vaal River	Harvest Fresh Farms Pty Ltd	Ms	Mokgethi	Tshabalala	Director	Gauteng
Directly Affected Landowner, ZoI_Joan Road to Vaal River	Ixoxo Backpackers	Mr	Avan	Rensburg		Gauteng

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Directly Affected Landowner, ZoI_Joan Road to Vaal River	Magagula Primary School	Mr	Sipho Abram	Mdluli	Principal	Gauteng
Directly Affected Landowner, ZoI_Joan Road to Vaal River	Murriers Integral Solutions Pty Ltd	Mr	Lou-Ami	Viviers	Director	Gauteng
Directly Affected Landowner, ZoI_Joan Road to Vaal River	Synag Dairy Farm 4	Mr	Simon	Lavery	Director	Gauteng
Directly Affected Landowner, ZoI_Joan Road to Vaal River	Synag Dairy Farm 4	Mr	Sphiwe	Mashinini	Assistant Manager	Gauteng
Directly Affected Landowner, ZoI_to Joan Road	Bestby Shelving Pty Ltd	Ms	Liza Ann	Bezuidenhout	Landowner	Gauteng
Directly Affected Landowner, ZoI_to Joan Road	KIRON PROJECTS PTY LTD	Mr	Barend	Greyling		Gauteng
Directly Affected Landowner, ZoI_to Joan Road	KIRON PROJECTS PTY LTD	Ms	Jana	Odendaal-Sing		Gauteng
Directly Affected Landowner, ZoI_to Joan Road	Macsteel Service Centre S A Pty Ltd	Ms	Frikkie	Erasmus	Manager	Gauteng
Directly Affected Landowner, ZoI_Joan Road to Vaal River	Private Landowner	Mr	Simon	Griffith	Owner	Gauteng
Directly Affected Landowner, ZoI_to Joan Road	Private Landowner	Mr		Mtiaz	Assistant Manager	Gauteng
Directly Affected Landowner, ZoI_to Joan Road	Private Landowner	Mr	Hendrick	Groenewald	Landowner	Gauteng

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Directly Affected Landowner, ZoI_to Joan Road	Private Landowner	Mr	Kathleen Isobel	Jan	Landowner	Gauteng
Directly Affected Landowner, ZoI_to Joan Road	Private Landowner	Mr	Nkgodi Stephen	Aphane	Landowner	Gauteng
Directly Affected Landowner, ZoI_to Joan Road	Private Landowner	Ms	Helet	Brok	Co-Owner	Gauteng
Directly Affected Landowner, ZoI_to Joan Road	Private Landowner (N3 Livestock Traders)	Mr	Francois	Venter	Son	Gauteng
Directly Affected Landowner, ZoI_to Joan Road	Vitagreen CC	Ms	Lesley Ann	Bull		Gauteng
District Municipality, Withok ZoI	Sedibeng District Local Municipality	Mr	Motsumi	Mathe	Municipal Manager	Gauteng
District Municipality, Withok ZoI	Sedibeng District Local Municipality	Mr	Pieter	Nieuwanhuizen	Disaster Operational Manager	Gauteng
District Municipality, Withok ZoI	Sedibeng District Local Municipality	Ms	Julia	Rasegwete	Environmental Officer	Gauteng
District Municipality, Withok ZoI	Sedibeng District Local Municipality	Ms	Sarah	Mothapo	Director: Disaster Manager	Gauteng
Environmental NGO's	African Wattle Crane Programme (ICF/EWT)	Ms	Kerryn	Morrison	Senior Manager: Africa	Gauteng
Environmental NGO's	Benchmarks Foundation (BMF)	Mr	David	van Wyk	Lead Researcher	Gauteng
Environmental NGO's	Benchmarks Foundation (BMF)	Mr	Moses	Cloete	Director	Gauteng

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Environmental NGO's	Benchmarks Foundation (BMF)	Mr	Simo	Gumede	Logistics and Administration Lead	Gauteng
Environmental NGO's	Benchmarks Foundation (BMF)	Ms	Busi	Thabane	General Manager	Gauteng
Environmental NGO's	Birdlife South Africa (BLSA)	Dr	Kirsten	Day	Policy & Advocacy Manager	Gauteng
Environmental NGO's	Centre for Environmental Rights (CER)	Mr	Brandon	Abdinor	Programme Head: Pollution & Climate Change	Gauteng
Environmental NGO's	Council of Geosciences	Mr	Henk	Coetzee	Environmental Manager	Gauteng
Environmental NGO's	Earthlife Africa Johannesburg	Ms	Makoma	Lekalakala	Director	Gauteng
Environmental NGO's	Endangered Wildlife Trust (EWT)	Dr	Ian	Little	Head of Conservation and Science	Gauteng
Environmental NGO's	Endangered Wildlife Trust (EWT)	Dr	Oliver	Cowan	Conservation Science Officer	Gauteng
Environmental NGO's	Federation for Sustainable Environment (FSE)	Ms	Mariette	Liefferink	Chief Executive Officer	Gauteng
Environmental NGO's	Gauteng Wetland Forum	Mr	Bismark	Mashau	Chairperson	Gauteng
Environmental NGO's	Gauteng Wetland Forum	Ms	Keitumetse	Mekgoe	DEA Provincial Coordinator	Gauteng
Environmental NGO's	Groundwork	Mr	Bobby	Peek	Director	Gauteng

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Environmental NGO's	Johannesburg Heritage Foundation	Mr	Mark	Schaerer	Member of the Joint Plans Committee West	Gauteng
Environmental NGO's	Klipwas	Mr	Dennis	Jane	Operations	Gauteng
Environmental NGO's	Kongiwe Environmental	Mrs	Vanessa	Viljoen	Consultant	Gauteng
Environmental NGO's	Minerals Council South Africa	Mr	Babalwa	Matiwane	Environment Department	Gauteng
Environmental NGO's	South African Human Rights Commission	Mr	Wisani	Baloyi	Communications Co-ordinator	Gauteng
Environmental NGO's	South African Human Rights Commission	Ms	Chantal	Kisoon	CEO PA	Gauteng
Environmental NGO's	WESSA (Wildlife & Environmental Society of South Africa) Springs & Nigel branch	Mr	Peter	Law		Gauteng
Environmental NGO's	Wildlife and Environmental Society of South Africa (WESSA)	Mr	John	Wesson	Manager: Conservation Specialist	Gauteng
Environmental NGO's	Wildlife and Environmental Society of South Africa (WESSA)	Ms	Tevya	Lotriet	Senior Sustainability Programme Manager	Gauteng
Farmers Association	African Farmers' Association of South Africa (AFASA)	Ms	Nicky	Mabokela	Gauteng Chairperson	Gauteng
Indirectly Affected Landowner	Elshaddai Learning Academy	Mr	Michael	Nienaber	Principal	Gauteng
Indirectly Affected Landowner	Multi Waste (Jetpark) Pty Ltd	Mr	Peter	Dolan		Gauteng

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Indirectly Affected Landowner	Multi Waste (Jetpark) Pty Ltd	Mr	Piet	Moller	Landowner	Gauteng
Indirectly Affected Landowner	Nkomo Prop CC	Mr		Muhammed	Landowner	Gauteng
Indirectly Affected Landowner	Private Co-Landowner	Mr	Hendrick	Mahlase	Landowner	Gauteng
Indirectly Affected Landowner	Private Landowner	Mr	Ronald Erol	Hirschowitz		Gauteng
Indirectly Affected Landowner	Tsakane Build IT	Mr	John	van Tonder	Manager	Gauteng
Indirectly Affected Landowner	Tsakane Build IT	Mr	Willem	Du Plessis	Landowner	Gauteng
Indirectly Affected Landowner, Local Municipality	City of Ekurhuleni Metropolitan Municipality	Dr	Ewert	Maseko	Senior Property Officer: Property Management Springs and Kwa-Thema CCA	Gauteng
Indirectly Affected Landowner, Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Winston	Marumo	Real Estate and Property Management Department: Brakpan	Gauteng
Indirectly Affected Landowner, National Government	Department of Public Works and Infrastructure (DPWI)	Mr	Jacob	Mahloko	Construction Project Manag ement	Gauteng
Indirectly Affected Landowner, National Government	Department of Public Works and Infrastructure (DPWI)	Ms	Friedah	Khoza	Property Manager	Gauteng
Interested & Affected Party	Boshoff Smuts Inc on Behalf of AFGRI	Ms	Caitlin	Coetzee	Candidate Attorney	Gauteng
Interested & Affected Party	Klipriver- Suikerboschrand Conservancy	Mr	Louis André	du Toit	Member	Gauteng

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Interested & Affected Party	Klipriver- Suikerboschrand Conservancy	Ms	Nichole	du Toit	Member	Gauteng
Interested & Affected Party	Klipriver-Suikerboschrand Conservancy	Ms	Roxy	du Toit	Chairperson	Gauteng
Interested & Affected Party	Mega Primary School/Withok Venue	Mr	Mark	Zulu	Principle: Maga Primary School	Gauteng
Interested & Affected Party	Miller Projects Trading	Mr	Sello	Matseletsele		Gauteng
Interested & Affected Party	St Paul Anglican Church - Henley on Klip	Mr	Victor	Nkosi	Member	Gauteng
Interested & Affected Party	Umsizi Sustainable Social Solutions (Pty) Ltd	Mr	Cletus	Dambu	Facilitator	Gauteng
Interested & Affected Party	Umsizi Sustainable Social Solutions (Pty) Ltd	Mr	John-Mark	Kilian		Gauteng
Interested & Affected Party	Umsizi Sustainable Social Solutions (Pty) Ltd	Mr	Lerato	Molefe	Operations Director	Gauteng
Interested & Affected Party	Umsizi Sustainable Social Solutions (Pty) Ltd	Mr	Veli	Mokalapa		Gauteng
Interested & Affected Party	Umsizi Sustainable Social Solutions (Pty) Ltd	Ms	Daina	Damba	Facilitator	Gauteng
Interested & Affected Party	Umsizi Sustainable Social Solutions (Pty) Ltd	Ms	Jeanine	Kirkman		Gauteng
Interested & Affected Party	Umsizi Sustainable Social Solutions (Pty) Ltd	Ms	Rochelle	Louw		Gauteng

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
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)	Mr	Gift	Nkabinde	RLO - Legal Representative	Gauteng
Labour Union	National Union of Metal Workers of South Africa (NUMSA)	Ms	Zwiitwaho	Raidane	RLA - Legal Representative	Gauteng
Libraries, Withok ZoI	Ekurhuleni: Brakpan Public Library	Mr	Bongani	Dlamini	Assistant Librarian	Gauteng
Libraries, Withok ZoI	Ekurhuleni: Brakpan Public Library	Ms	Vincent	Moabelo	Librarian	Gauteng
Libraries, Withok ZoI	Ekurhuleni: Katlehong Public Library	Ms	Zanele	Mpevu	Librarian	Gauteng
Libraries, Withok ZoI	Ekurhuleni: Tsakane Public Library	Ms	Lindiwe	Shandu	Librarian	Gauteng
Libraries, Withok ZoI	Ekurhuleni: Zonkizizwe Public Library	Ms	Thuli	Mashigo	Librarian	Gauteng
Libraries, Withok ZoI	Midvaal: Henley on Klip Public Library	Ms	Ntsoaki	Mofokeng	Librarian	Gauteng
Libraries, Withok ZoI	Midvaal: Meyerton Public Library	Ms	Prudence	Matitwane	Librarian	Gauteng
Libraries, Withok ZoI	Midvaal: Randvaal Public Library	Ms	Moira	Frost	Librarian	Gauteng
Local Business	KTL Machinery and Plant Hire	Mr	Charles	Le Roux	Director	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	Ms	Nicky	Botha	Plant Manager	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality			Ekurhuleni Environment		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	Dr	Imogen	Mashazi	Municipal Manager	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Bafana	Mazibuko	Disaster & Emergency Services Department	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Bafana J.	Maseko		Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Christopher	Munyai	Brakpan Economic Development	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Flip	Visser	Air Quality Section	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Gerhard	Mac Carron	Ekurhuleni Spatial Planning	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Godfrey	Rakhivhani		Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Hennie	Croucamp	Emergency Services Codes	Gauteng

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Johan	Koekemoer	Manager Environmental Health	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Johan	Crafford	City Planning: Chief Building Inspector	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Justice T.	Ndobe		Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Katlego	Mokwena	IDP Manager	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Makhudu	Molepo	Senior Environmental Health Practitioner	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Martin	Bekker	Spatial Planning, City Planning Department	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Mdumiseni	Mkhize		Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Mhlengi	Makhubane	Emergency Services	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Mhlengi	Makhubalo		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	Moffat	Ramabulana	Senior Environmental Health Practitioner	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Moses	Gafane	Health & Social Department - Germiston / Delmore /Brakpan	Gauteng

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Nkosindiphile	Xhakaza	Mayor	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Papi	Msimang	Disaster Management	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Philip	Nice	Roads and Storm Water Department	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Rendani	Khorombi	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	Scelo	Ndima	Environmental Resource and Waste Management Department	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Simon	Phahlamohlaka		Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Smuts	Marais	Water Quality Section	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	Thabang	Mokoena	Strategic Advisor -Office of the City Manager	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	Theo	Pretorius		Gauteng

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Thymon	Rivisi	Area Development Planner (Alberton)	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Tshepo	Ramokoka		Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Victor	Nesengani	Waste Management Services Division : Compliance	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mrs	Adri	Venter	Municipal Managers PA	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Ms	Betty	Thabethe	Waste Management Services Division : Compliance	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Ms	Boitumelo	Mona	Governance and Compliance	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	Cynthia	Masango	Disaster Management	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Ms	Dorcus	Modiba	Environmental Health Manager	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Ms	Dudu	Twala	Area Manager: Brakpan CCA: City Planning	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Ms	Elizabeth	Motupa		Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Ms	Evelyn	Hlatshwayo	Real Estate Nigel	Gauteng

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
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	Ms	Helen	Naidoo	CRM Manager Brakpan / Springs	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Ms	Jane	Ntsandeni	Control librarian	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	Ms	Lerato	Selolo	Compliance Division	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Ms	Lillian	Matlala	Environmental Officer	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Ms	Maggy	Hadebe	Ekurhuleni Spatial Planning	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Ms	Mankgodi	Hlongwane	Environmental Protection, Resilience and Project Management	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Ms	Mkateko	Marilele		Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Ms	Mpho	Mohale	Environmental Officer	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Ms	Neo	Mphahlele	Acting Regional Manager for Disaster Management and Emergency	Gauteng

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Ms	Nomvula	Flara		Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Ms	Nonhlanhla	Mnisi	Waste Management Services Division : Compliance	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Ms	Nosipho	Mackay	Social & Health Department: Manager	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Ms	Nthabiseng	Tshivhenga	Speaker	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Ms	Phakamile	Mbengashe		Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Ms	Pheta P.	Mokoena	Waste Manager: EMM	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Ms	Rebotile	Motau	CRM Manager Tsakane / Geluksdal	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Ms	Regina	Gosebo	Senior Admin	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Ms	Sibongile	Mdhluli		Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Ms	Fundiswa	Ndobe		Gauteng
Local Municipality, Ward Committee Member	City of Ekurhuleni Metropolitan Municipality	Mr	Lawrence	Mahlobogwane	Ward Committee Member: Ward 99	Gauteng
Local Municipality, Ward Committee Member	City of Ekurhuleni Metropolitan Municipality	Mr	Muzi	Hlatshwayo	Ward Committee Member: Ward 99	Gauteng

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Local Municipality, Ward Committee Member	City of Ekurhuleni Metropolitan Municipality	Mr	Sbusiso	Mdlalose	Ward Committee Member: Ward 99	Gauteng
Local Municipality, Ward Committee Member	City of Ekurhuleni Metropolitan Municipality	Mr	Vusi	Thwala	Ward Committee Member: Ward 99	Gauteng
Local Municipality, Ward Committee Member	City of Ekurhuleni Metropolitan Municipality	Mr	Vusi	Mbele	Ward Committee Member: Ward 99	Gauteng
Local Municipality, Ward Committee Member	City of Ekurhuleni Metropolitan Municipality	Ms	Agnes	Maguvu	Ward Committee Member: Ward 99	Gauteng
Local Municipality, Ward Committee Member	City of Ekurhuleni Metropolitan Municipality	Ms	Brenda	Fourie	Ward Committee Member: Ward 99	Gauteng
Local Municipality, Ward Committee Member	City of Ekurhuleni Metropolitan Municipality	Ms	Khosi	Malaka	Committee Member: Ward 112	Gauteng
Local Municipality, Ward Committee Member	City of Ekurhuleni Metropolitan Municipality	Ms	Nomadlozi Gladys	Mofokeng	Ward Committee Member: Ward 99	Gauteng
Local Municipality, Ward Committee Member	City of Ekurhuleni Metropolitan Municipality	Ms	Rose	Munjoma	Ward Committee Member: Ward 99	Gauteng
Local Municipality, Ward Committee Member	City of Ekurhuleni Metropolitan Municipality	Ms	Lindi	Thwala	Committee Member: Ward 112	Gauteng
Local Municipality, Ward Committee Member	City of Ekurhuleni Metropolitan Municipality	Ms	Manunu Mswazi	Mabele	Committee Member: Ward 112	Gauteng
Local Municipality, Ward Committee Member	City of Ekurhuleni Metropolitan Municipality	Ms	Themba	Matiso	Committee Member: Ward 112	Gauteng
Local Municipality, Ward Committee Member	Ekurhuleni Metropolitan Municipality	Mr		Pheneas	Committee Member: Ward 112	Gauteng

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Local Municipality, Ward Committee Member	Ekurhuleni Metropolitan Municipality	Mr	Julias	Marupta	Committee Members: Ward 112Ward112	Gauteng
Local Municipality, Ward Committee Member	Ekurhuleni Metropolitan Municipality	Ms		Brenda	Committee Member: Ward 112	Gauteng
Ward Councillor, Withok ZoI	City of Ekurhuleni Metropolitan Municipality	Cllr	Pusetso	Petlele	Ward Councillor: Ward 10	Gauteng
Ward Councillor, Withok ZoI	City of Ekurhuleni Metropolitan Municipality	Cllr	Moses	Sibiya	Ward Councillor: Ward 85	Gauteng
Local Municipality, Withok ZoI	City of Ekurhuleni Metropolitan Municipality	Cllr	Alex	Thobejane	Ward Councillor: Ward 108	Gauteng
Local Municipality, Withok ZoI	City of Ekurhuleni Metropolitan Municipality	Cllr	Nkululeko	Sidu	Ward Councillor: Ward 45	Gauteng
Local Municipality, Withok ZoI	City of Ekurhuleni Metropolitan Municipality	Cllr	Petrus Andile	Daemane	Ward Councillor: Ward 99	Gauteng
Local Municipality, Withok ZoI	City of Ekurhuleni Metropolitan Municipality	Cllr	Thabiso	Letsoela	Ward Councillor: Ward 62	Gauteng
Local Municipality, Withok ZoI	City of Ekurhuleni Metropolitan Municipality	Cllr	Thekiso	Motsopi	Ward Councillor: Ward 64	Gauteng
Local Municipality, Withok ZoI	City of Ekurhuleni Metropolitan Municipality	Mr	Sanele	Ngobene	Ward Councillor: Ward 61	Gauteng
Local Municipality, Withok ZoI	City of Ekurhuleni Metropolitan Municipality	Ms	Annah	Mnguni	Ward Councillor: Ward 112	Gauteng
Local Municipality, Withok ZoI	Lesedi Local Municipality	Mr	Star	Moholobela	Senior Manager: Water, Sanitation & Solid Waste	Gauteng

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Local Municipality, Withok ZoI	Lesedi Local Municipality	Ms	Phindi	Mpemvu	SpeakerPA: Lebo Rakosa	Gauteng
Local Municipality, Withok ZoI	Lesedi Local Municipality	Mr	Ifpfi	Mudzanani	Town Planning young graduate	Gauteng
Local Municipality, Withok ZoI	Lesedi Local Municipality	Mr	Lloyd	Machimana	Senior Town Planner	Gauteng
Local Municipality, Withok ZoI	Lesedi Local Municipality	Mr	Mandla	Masina	Chief Fire Officer	Gauteng
Local Municipality, Withok ZoI	Lesedi Local Municipality	Mr	Obed	Kgolane	Waste Management Specialist	Gauteng
Local Municipality, Withok ZoI	Lesedi Local Municipality	Mr	Sizwe	Mazibuko	HOD: Local Economic Development and Planning	Gauteng
Local Municipality, Withok ZoI	Lesedi Local Municipality	Ms	Dineo	Makwa	Town Planning Technician	Gauteng
Local Municipality, Withok ZoI	Lesedi Local Municipality	Ms	Lerato	Mokoena	GIS Specialist	Gauteng
Local Municipality, Withok ZoI	Lesedi Local Municipality	Ms	Marinda	van Kraayenburg	Senior Environmental Health Practitioner	Gauteng
Local Municipality, Withok ZoI	Lesedi Local Municipality	Ms	Nompumelelo	Khawula	HOD: Community Services	Gauteng
Local Municipality, Withok ZoI	Midvaal Local Municipality	Mr	Anton	Groenewald	Municipal Manager	Gauteng
Local Municipality, Withok ZoI	Midvaal Local Municipality	Mr	Steyn	Hannes	Disaster Management: Chief Fire Officer	Gauteng

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Local Municipality, Withok ZoI	Midvaal Local Municipality	Cllr	A	Dickson	Ward Councillor: Ward 15	Gauteng
Local Municipality, Withok ZoI	Midvaal Local Municipality	Cllr	B	Jordan	Ward Councillor: Ward 3	Gauteng
Local Municipality, Withok ZoI	Midvaal Local Municipality	Cllr	F	Peters	Ward Councillor: Ward 1	Gauteng
Local Municipality, Withok ZoI	Midvaal Local Municipality	Cllr	J	Viljoen	Ward Councillor: Ward 13	Gauteng
Local Municipality, Withok ZoI	Midvaal Local Municipality	Cllr	M	Myburg	Ward Councillor: Ward 4	Gauteng
Local Municipality, Withok ZoI	Midvaal Local Municipality	Cllr	M	Kruger	Ward Councillor: Ward 12	Gauteng
Local Municipality, Withok ZoI	Midvaal Local Municipality	Cllr	P	Pretorius	Ward Councillor: Ward 14	Gauteng
Local Municipality, Withok ZoI	Midvaal Local Municipality	Cllr	S	Jan van Rensberg	Ward Councillor: Ward 2	Gauteng
Local Municipality, Withok ZoI	Midvaal Local Municipality	Mr	Thabo	Mabula	Waste Management: Manager	Gauteng
Local Municipality, ZoI_Joan Road to Vaal River, ZoI_to Joan Road	Midvaal Local Municipality	Ms	Samukelo	Simamane	Assistant Director: Environmental Management	Gauteng
National Government	Department of Agriculture, Land Reform and Rural Development	Mr	Khuthala	Dlamini		Gauteng
National Government	Department of Agriculture, Land Reform and Rural Development	Ms	Bridget	Tshikalange		Gauteng

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
National Government	Department of Agriculture, Land Reform and Rural Development	Ms	Mashudu	Marubini	Deputy Director	Gauteng
National Government	Department of Agriculture, Land Reform and Rural Development (DALRRD)	Mr	Harry	Maphutha	Regional Land Claims Commissioner	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 (DALRRD)	Ms	Amukelani	Shiburi	Land Claim 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
National Government	Department of Agriculture, Land Reform and Rural Development (DALRRD)	Ms	Phyllystas	Mmakola	Resource Auditor	Gauteng
National Government	Department of Agriculture, Land Reform and Rural Development (DALRRD)	Ms	Vuyiswa	Qobo	Environmental Officer	Gauteng
National Government	Department of Forestry, Fisheries and the Environment (DFFE)	Dr	Mpho	Tshitangoni	Chief Director: Land Remediation	Gauteng
National Government	Department of Forestry, Fisheries and the Environment (DFFE)	Mr	Andrew	Ngubeni		Gauteng
National Government	Department of Forestry, Fisheries and the Environment (DFFE)	Mr	Lucas	Mahlangu	Control Environmental Officer: Waste Licensing	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 Forestry, Fisheries and the Environment (DFFE)	Mr	Obed	Baloyi	Environmental Impact Evaluation	Gauteng

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
National Government	Department of Forestry, Fisheries and the Environment (DFFE)	Mr	Shumani	Dzivhani	Deputy Director: Forestry Regulation	Gauteng
National Government	Department of Forestry, Fisheries and the Environment (DFFE)	Mr	Themba	Dlamini	Gauteng Regional Office	Gauteng
National Government	Department of Forestry, Fisheries and the Environment (DFFE)	Ms	Boikanyo	Matsha	Senior Forestry Regulation Officer	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)	Ms	Mashudu	Mudau	Protected Areas Planning and Management Effectiveness	Gauteng
National Government	Department of Forestry, Fisheries and the Environment (DFFE)	Ms	Mashudu	Mukwevho	Resource Auditor	Gauteng
National Government	Department of Forestry, Fisheries and the Environment (DFFE)	Ms	Mpho Patience	Thenga		Gauteng
National Government	Department of Forestry, Fisheries and the Environment (DFFE)	Ms	Pumeza	Nodada	Chief Director: Forestry Management	Gauteng
National Government	Department of Mineral Resources and Energy (DMRE)	Adv	Mmadikeledi	Malebe	DDG: Mineral Regulation	Gauteng
National Government	Department of Mineral Resources and Energy (DMRE)	Mr	David	Msiza	Mine Health and Safety Inspectorate	Gauteng
National Government	Department of Mineral Resources and Energy (DMRE)	Mr	Jacob	Mbele	Director General PA: Ms Mamabefu Modipa	Gauteng
National Government	Department of Mineral Resources and Energy (DMRE)	Mr	Nicholas	Chavalala	Regional Manager: Environmental Management	Gauteng

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
National Government	Department of Mineral Resources and Energy (DMRE)	Mr	Rudzani	Mabogo	Head of Environment: Assistant Director	Gauteng
National Government	Department of Mineral Resources and Energy (DMRE)	Mr	Siyabonga	Vezi	Acting Gauteng Regional Director	Gauteng
National Government	Department of Mineral Resources and Energy (DMRE)	Mr	Tseliso	Maqubela	Minerals and Petroleum Regulation	Gauteng
National Government	Department of Mineral Resources and Energy (DMRE)	Ms	Buyisiwe Ntokozo	Ngcwabe	DDG- Mineral Policy & Promotions	Gauteng
National Government	Department of Mineral Resources and Energy (DMRE)	Ms	Carol	Khanyile	Gauteng Regional: Secretary	Gauteng
National Government,	Department of Mineral Resources and Energy (DMRE)	Mr	Musa	Mangobe	Gauteng Environment	Gauteng
National Government	Department of Public Works and Infrastructure (DPWI)	Mr	Khumbulani	Thobani	Town Planning Services	Gauteng
National Government	Department of Public Works and Infrastructure (DPWI)	Mr	Zakhele	Ndebele	Real Estate Management Services	Gauteng
National Government	Department of Public Works and Infrastructure (DPWI)	Mr	Lutendo	Neduvhuledza	Town Planning Services (HO)	Gauteng
National Government	Department of Public Works and Infrastructure (DPWI)	Mr	Malusi	Ganiso	Town Planning Services (HO)	Gauteng
National Government	Department of Public Works and Infrastructure (DPWI)	Mr	Thapelo	Duma	PA to Regional Manager	Gauteng
National Government	Department of Public Works and Infrastructure (DPWI)	Ms	Desire	Msimango		Gauteng

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
National Government	Department of Public Works and Infrastructure (DPWI)	Ms	Jabulile	Mabaso	Acting Regional Manager	Gauteng
National Government	Department of Public Works and Infrastructure (DPWI)	Ms	Lerato	Mbatha		Gauteng
National Government	Department of Transport	Ms	Michelle	Phenya	Personal Assistant to the Director-General	Gauteng
National Government	Department of Water and Sanitation (DWS)	Ms	Puseletso	Teffo	Scientific Technician	Gauteng
National Government	Department of Water and Sanitation (DWS)	Mr	Adriaan	Claassen	Chief Engineer	Gauteng
National Government	Department of Water and Sanitation (DWS)	Mr	Andrew	Mbedzi	Instream	Gauteng
National Government	Department of Water and Sanitation (DWS)	Mr	Ayanda	Mtetwa	National	Gauteng
National Government	Department of Water and Sanitation (DWS)	Mr	Desmond	Mutshaine	Geochemistry	Gauteng
National Government	Department of Water and Sanitation (DWS)	Mr	Khathutshelo	Mudau	Specialised Production	Gauteng
National Government	Department of Water and Sanitation (DWS)	Mr	Londolani	Mutshekwa	Mine Water Quality Management	Gauteng
National Government	Department of Water and Sanitation (DWS)	Mr	Noe	Malise	Resource Protection & Waste	Gauteng
National Government	Department of Water and Sanitation (DWS)	Mr	Rendani	Ndou	Control Environmental Officer	Gauteng

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
National Government	Department of Water and Sanitation (DWS)	Mr	Victor	Nkuna	Environmental Officer	Gauteng
National Government	Department of Water and Sanitation (DWS)	Ms	Betty	Nakene	Gauteng: Nigel / Springs	Gauteng
National Government	Department of Water and Sanitation (DWS)	Ms	Candace	Enoch	Environmental Officer	Gauteng
National Government	Department of Water and Sanitation (DWS)	Ms	Faith Fulufhelo	Khosa	Gauteng Regional Representative	Gauteng
National Government	Department of Water and Sanitation (DWS)	Ms	Lumka	Kuse	Gauteng Wetland Forum (Downstream)	Gauteng
National Government	Department of Water and Sanitation (DWS)	Ms	Mogadi	Machaba	Environmental Officer	Gauteng
National Government	Department of Water and Sanitation (DWS)	Ms	Mulalo	Sidogi	Environmental Officer	Gauteng
National Government	Department of Water and Sanitation (DWS)	Ms	Nosie	Mazwi	Director: Mining and Industry Water Quality Regulation	Gauteng
National Government	Department of Water and Sanitation (DWS)	Ms	Portia C	Chawane	Control Environmental Officer Grade A	Gauteng
National Government	Department of Water and Sanitation (DWS)	Ms	Thabelo	Tshipate	Case Officer	Gauteng
National Government,	Department of Water and Sanitation (DWS)	Mr	Jacques	Jansen Van Vuuren	Vaal Dam Catchment Forum, Chairperson	Gauteng
National Government,	Department of Water and Sanitation (DWS)	Mr	Mabona (Rodney)	Lesiba	Control Environmental Officer, Klip River and	Gauteng

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
					Natalspruit Catchment Forum Assis	
National Government,	Department of Water and Sanitation (DWS)	Mr	Phillimon	Khwinana	Control Environmental Officer, Blesbokspruit and Rietspruit Catchment Forum Ch	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)	Mr	Jacques	Jansen Van Vuuren	Vaal Dam Catchment Forum, Chairperson	Gauteng
National Government	National Department of Health (DOH)	Ms	Belinda	Makhafola	Directorate: Environmental Health Deputy Director: Environmental Healthervices	Gauteng
National Government	National Nuclear Regulator (NNR)	Mr	Patle	Mohajane	Programme Manager: NORM	Gauteng
National Government	South African Heritage Resources Agency (SAHRA)	Ms	Khanyisile	Bonile	Heritage Officer: Development Applications Unit	Gauteng
National Government	South African Heritage Resources Agency (SAHRA)	Ms	Nokusho	Ngobeni	Heritage Officer	Gauteng
Nature Reserve	SANBI	Ms	Vivian	Malema	Director: Biodiversity Education and Public Engagement Directorate	Gauteng
Nature Reserve	SANParks	Ms	Nakisani	Namethe	Personal Assistant	Gauteng
Nature Reserve	Suikerbosrand Nature Reserve	Mr	Mpere	Mokoka	Manager	Gauteng

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Nature Reserve	Suikerbosrand Nature Reserve	Mr	Talfryn	Harris	Chairperson	Gauteng
Nature Reserve	Suikerbosrant Nature Reserve	Mr	Mavhungu	Malima	Environmental Education	Gauteng
Provincial Government	Department of Health Johannesburg District	Ms	Kgomotso	Leola	Environmental Health Practitioner	Gauteng
Provincial Government	Department of Health Johannesburg District	Ms	Thabiso	Motlhamme	African Director: Environment Department	Gauteng
Provincial Government	Department of Health: Gauteng Province	Mr	Cheleng	Khotle	Ekurhuleni District	Gauteng
Provincial Government	Department of Health: Gauteng Province	Mr	Simon	Choma	Acting Chief Director: Ekurhuleni District	Gauteng
Provincial Government	Department of Health: Gauteng Province	Ms	Londiwe	Mkhize	Environmental Health Practitioner- Ekurhuleni District	Gauteng
Provincial Government	GDARD			GDARD	Environmental Department	Gauteng
Provincial Government	Gauteng Department of Agriculture and Rural Development (GDARD)	Mr	Dan	Motaung	Deputy Director: EIA	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	Erick	Moletsane	Environmental Officer	Gauteng
Provincial Government	Gauteng Department of Agriculture and Rural Development (GDARD)	Mr	Happy	Khumalo	Gauteng Wetland Forum	Gauteng

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
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	Loyiso	Mkwana	Chief Director	Gauteng
Provincial Government	Gauteng Department of Agriculture and Rural Development (GDARD)	Mr	Marc	Leroy	Environmental Information Manager	Gauteng
Provincial Government	Gauteng Department of Agriculture and Rural Development (GDARD)	Mr	Nhlanhla	Makhathini	Assistant Director	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)	Mr	Tendani	Rambuda	Control Environmental Officer Grade B	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)	Ms	Albertina	Setsiba	PS	Gauteng
Provincial Government	Gauteng Department of Agriculture and Rural Development (GDARD)	Ms	Anga	Yaphi	PS - Biodiversity	Gauteng
Provincial Government	Gauteng Department of Agriculture and Rural Development (GDARD)	Ms	Lydia	Muditambi	Air Quality	Gauteng
Provincial Government	Gauteng Department of Agriculture and Rural Development (GDARD)	Ms	Christina	Seegers	Protected Areas	Gauteng
Provincial Government	Gauteng Department of Roads and Transport	Dr	Thulani	Mdadane	Gauteng Head of Department	Gauteng

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Provincial Government	Gauteng Wetland Forum (GDARD)	Mr	Mashau	Mpfareleni		Gauteng
Provincial Government	Gauteng Wetland Forum (GDARD)	Mr	Tebogo	Nkadimeng		Gauteng
Provincial Government	Gauteng: Department of Economic Development	Mr	Blake	Mosley-Lefatola		Gauteng
Provincial Government	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	Mr	Thendo Stanely	Makuya	Environmental Specialist	Gauteng
Water Bodies -Institution	Johannesburg Water (Pty) Ltd	Ms	Mpho	Mosia	Environmental Officer	Gauteng
Water Bodies -Institution	KlipSA: UJ (Department of Process of Energy & Environment Technology Station)	Dr	Kousar	Hoorzook	Station Engineer for Water and Sanitation	Gauteng
Water Bodies -Institution	Rand Water		Cwengile	Ma-Awu		Gauteng
Water Bodies -Institution	Rand Water	Mr	Obakeng	Tlhabye		Gauteng
Water Bodies -Institution	Rand Water	Ms	Lindiwe	Gamede		Gauteng
Water Bodies -Institution	Rand Water	Ms	Peleka	Mashele		Gauteng

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Water Bodies -Institution	Randwater	Mr	Jimmy	Maluleke	Environmental Co-ordinator	Gauteng
Water Bodies -Institution	Randwater	Mr	Lesley	Hoy	Manager Environmental Assessments & Compliance	Gauteng
Water Bodies -Institution	Randwater	Mr	Marc	de Fontein	Senior Water Quality Advisor & Blesbokspruit to Forum Member	Gauteng
Water Bodies -Institution	Randwater	Mr	Noel	Dzhivhuho	Civil Engineering Assistant - HO	Gauteng
Water Bodies -Institution	Randwater	Mr	Thokozani	Masilela	Environmental Assessor	Gauteng
Water Bodies -Institution	Randwater	Ms	Natalie	Koneight	Secretary - Nursery-CD	Gauteng
Water Bodies -Institution	Randwater	Ms	Nomkhosi	Mohlahlo		Gauteng
Water Bodies -Institution	Randwater	Ms	Nomzamo	Sithole		Gauteng
Water Bodies -Institution	Randwater	Ms	Zesha	Ramrathan	Civil Engineering Technologist	Gauteng
Water Bodies -Institution	Water Research Commission	Dr	Shafick	Adams		Gauteng
Water Bodies -Institution	Water Research Commission	Mr	Bennie	Mokgonyana	Coordinator	Gauteng
Water Bodies -Institution	Water Research Commission	Mr	Jay	Bhagwan	Executive Manager: Water Use and Waste Management	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	Ms	Penny	Jaca	Water Resource Management	Gauteng
Water Bodies -Institution	Water Research Commission	Ms	Shirley	Machelisi	Water Use & Waste Management	Gauteng

Landowners Database Withok Project Area

Directly Affected Landowners

Farm Name & Number	Farm ID	Farm Portion	Owner-Windeed	Farm owner	Contact Person
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 (Multiple Landowners)
Withok 131	IR	Withok 398	No windeed info	Build It Tsakane Private Landowner	Mr Willem Du Plessis (Co-Landowner) Mr Hendrick Mahlase (Co-Landowner
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	Mr Winston Marumo, 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	Mr Winston Marumo, 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	Mr Winston Marumo, 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	Mr Mohammend, Owner
Vlakfontein 161	IR	18	Multi-Waste Pty Ltd	Multi-Waste (Jet Park) (Pty)	Mr Piet Moller
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

© 2025 Kongiwe Environmental (Pty) Ltd

Appendix C2: Land Claims

© 2024 Kongiwe Environmental (Pty) Ltd

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

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

© 2024 Kongiwe Environmental (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,



Vanessa Viljoen
Stakeholder Engagement Consultant

Vanessa Viljoen

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
150 Bryanston Drive, Bryanston, Sandton, 2191, South Africa.
PostNet Suite no 163, Private Bag X21, Bryanston, 2021, South Africa.
www.kongiwe.com

Disclaimer: The provisions of Section 11 of the Electronic Communications and Transactions Act 25 of 2002 apply to this email notice and make it enforceable and binding on the recipient/addressee. This email message (including attachments) contains information which may be confidential and/or legally privileged. Unless you are the intended recipient, you may not use, copy or disclose to anyone the message or any information contained in the message or from any attachments that were sent with this email, and if you have received this email message in error, please advise the sender by email, and delete the message. Unauthorised disclosure and/or use of information contained in this email may result in civil and criminal liability. Everything in this e-mail and attachments relating to the official business of Kongiwe Environmental (Pty) Ltd is proprietary to the company. Caution should be observed in placing any reliance upon any information contained in this e-mail, which is not intended to be a representation or inducement to make any decision in relation to Kongiwe Environmental (Pty) Ltd. Any decision taken based on the information provided in this e-mail, should only be made after consultation with appropriate legal, regulatory, tax, technical, business, investment, financial, and accounting advisors. The e-mail address of the sender may not be used, copied, sold, disclosed or incorporated into any database or mailing list for spamming and/or other marketing purposes without the prior consent of Kongiwe Environmental (Pty) Ltd. Unless the intention to contract has been expressed in this message, this message cannot be regarded as a solicitation to contract, nor be seen as an offer or acceptance of contractual agreement. Neither the sender of the e-mail, nor Kongiwe Environmental (Pty) Ltd shall be liable to any party for any direct, indirect or consequential damages, including, without limitation, loss of profit, interruption of business or loss of information, data or software or otherwise. No warranties are created or implied that an employee of Kongiwe Environmental (Pty) Ltd and/or a contractor of Kongiwe Environmental (Pty) Ltd is authorised to create and send this e-mail.

COMMISSION ON RESTITUTION OF LAND RIGHTS

OFFICE OF THE REGIONAL LAND CLAIMS COMMISSIONER: GAUTENG
No. 9 Bailey Lane, Arcadia, 0007 | Private Bag X 03, Arcadia, 0007
Tel: (012) 310 6500 | Fax: (012) 323 0312

Enquiries: **Desiree Tsholofelo Kgole**
Telephone: **(012) 310 6578**

Dear Mr / Ms **Vanessa Viljoen**

LAND CLAIMS ENQUIRY – PORTION 11 OF THE FARM ROOIKRAAL 156, REG DIV IR, GAUTENG

We refer to your land claim enquiry dated **18 October 2024.**

We confirm that as at the date of this letter no land claims appear on our database in respect of the Properties listed as per attached list. This includes the database for claims lodged by 31 December 1998; and those lodged between 1 July 2014 and 27 July 2016 in terms of the Restitution of Land Rights Amendment Act, 2014.

Whilst the Commission takes reasonable care to ensure the accuracy of the information it provides, there are various factors that are beyond the Commission's control, particularly relating to claims that have lodged but not yet been gazetted such as:

1. Some Claimants referred to properties they claim dispossession of rights in land against using historical property descriptions which may not match the current property description; and
2. Some Claimants provided the geographic descriptions of the land they claim without mentioning the particular actual property description they claim dispossession of rights in land against.

The Commission therefore does not accept any liability whatsoever if through the process of further investigation of claims it is found that there is in fact a land claim in respect of the above property.

If you are aware of any change in the description of the above property after 19 June 1913 kindly supply us with such description so as to enable us to do a further search.

In conclusion, please note that **enquiries should be forwarded to Desiree Tsholofelo Kgole** who could be reached at the following contact details: Tel: (012) 310-6578 or via e-mail at desiree.kgole@dalrrd.gov.za

Yours faithfully

MS. C. BENYANE
CHIEF DIRECTOR
OFFICE OF THE REGIONAL LAND CLAIMS COMMISSION
GAUTENG PROVINCE
DATE: 25/10/2024

COMMISSION ON RESTITUTION OF LAND RIGHTS

OFFICE OF THE REGIONAL LAND CLAIMS COMMISSIONER: GAUTENG
No. 9 Bailey Lane, Arcadia, 0007 | Private Bag X 03, Arcadia, 0007
Tel: (012) 310 6500 | Fax: (012) 323 0312

Enquiries: Desiree Tsholofelo Kgole
Telephone: (012) 310 6500/6578

Dear Mr / Ms **Vanessa Viljoen**

LAND CLAIMS ENQUIRY – PORTION 77, 78, 79 & 80 OF THE FARM WITHOK 131, REG DIV IR, GAUTENG

We refer to your land claim enquiry dated **18 October 2024**.

We confirm that there is/are an existing land claims against the Property/ies. The claims were lodged as per attached list.

The claim was lodged in terms of the Restitution of Land Rights Amendment Act, 2014 (Act No 15 of 2014) ("the Amendment Act") which, amongst others, reopened the lodgement of claims for a period of five years.

The validity of the Amendment Act was challenged in the Constitutional Court. The Constitutional Court found the Amendment Act to be invalid because of the failure of Parliament to facilitate public involvement as required by the Constitution. The Amendment Act ceased to be law on 28 July 2016.

The Constitutional Court ordered that the claims that were lodged between 1 July 2014 and 27 July 2016 are validly lodged, but it interdicted the Commission from processing those claims until the Commission has finalised the claims lodged by 31 December 1998 or until Parliament passes a new law providing for the re-opening of lodgement of land claims. Parliament was given until 27 July 2018 to pass such a law.

Parliament has so far not been able to pass new legislation and has instead approached the Constitutional Court for an extension until 29 March 2019 and the application was rejected. As a result the Commission will, unless directed otherwise by Constitutional Court, not be processing claims lodged between 1 July 2014 until 27 July 2016 until all the claims lodged on or before 31st December 1998 are finalised and or a new Act is passed by Parliament and signed into law by the President. In the meantime, the Commission through the Chief Land Claims Commissioner has been ordered to report the progress of all the outstanding land claims on six months basis for monitoring by the court.

The Commission will contact you directly and communicate widely once we have been granted permission to begin dealing with these claims.

For further enquiries please contact
Solomon Maruma at solomon.maruma@dalrrd.gov.za , telephone 012 310 6588
Edith Mokgoko at Edith.mokgoko@dalrrd.gov.za , telephone 012 310 6573

Yours faithfully

MS. C. BENYANE
CHIEF DIRECTOR
OFFICE OF THE REGIONAL LAND CLAIMS COMMISSION
GAUTENG PROVINCE
DATE: 25/10/2024

COMMISSION ON RESTITUTION OF LAND RIGHTS

OFFICE OF THE REGIONAL LAND CLAIMS COMMISSIONER: GAUTENG
No. 9 Bailey Lane, Arcadia, 0007 | Private Bag X 03, Arcadia, 0007
Tel: (012) 310 6500 | Fax: (012) 323 0312

Enquiries: Ms Desiree T Kgole
Telephone: (012) 310-6500/6578

Other claimants who also lodged their claims on **WITHOK 131 IR**

R/3/117/261/43762	MNGUNI NOMBI ESTHA	2015-01-13
R/3/117/261/43769	SIBUSI MACALA PHINEAS	2015-01-13
R/3/117/261/47985	NHLENGETWA MARIA NTOMBIKAYISE	2015-02-11
R/3/117/261/47966	MKWANAZI ISAAC JABULANE	2015-02-11
R/3/117/261/52221	NKHWASHU SILOANE SELINA ROSSY	2015-03-12

COMMISSION ON RESTITUTION OF LAND RIGHTS

OFFICE OF THE REGIONAL LAND CLAIMS COMMISSIONER: GAUTENG
No. 9 Bailey Lane, Arcadia, 0007 | Private Bag X 03, Arcadia, 0007
Tel: (012) 310 6500 | Fax: (012) 323 0312

Enquiries: Desiree Tsholofelo Kgole
Telephone: (012) 310 6500/6578

Dear Mr / Ms **Vanessa Viljoen**

LAND CLAIMS ENQUIRY – PORTION 14, 15 & 20 OF THE FARM VLAKFONTEIN 161, REG DIV IR, GAUTENG

We refer to your land claim enquiry dated **18 October 2024**.

We confirm that there is/are an existing land claims against the Property/ies. The claims were lodged as per attached list.

The claim was lodged in terms of the Restitution of Land Rights Amendment Act, 2014 (Act No 15 of 2014) ("the Amendment Act") which, amongst others, reopened the lodgement of claims for a period of five years.

The validity of the Amendment Act was challenged in the Constitutional Court. The Constitutional Court found the Amendment Act to be invalid because of the failure of Parliament to facilitate public involvement as required by the Constitution. The Amendment Act ceased to be law on 28 July 2016.

The Constitutional Court ordered that the claims that were lodged between 1 July 2014 and 27 July 2016 are validly lodged, but it interdicted the Commission from processing those claims until the Commission has finalised the claims lodged by 31 December 1998 or until Parliament passes a new law providing for the re-opening of lodgement of land claims. Parliament was given until 27 July 2018 to pass such a law.

Parliament has so far not been able to pass new legislation and has instead approached the Constitutional Court for an extension until 29 March 2019 and the application was rejected. As a result the Commission will, unless directed otherwise by Constitutional Court, not be processing claims lodged between 1 July 2014 until 27 July 2016 until all the claims lodged on or before 31st December 1998 are finalised and or a new Act is passed by Parliament and signed into law by the President. In the meantime, the Commission through the Chief Land Claims Commissioner has been ordered to report the progress of all the outstanding land claims on six months basis for monitoring by the court.

The Commission will contact you directly and communicate widely once we have been granted permission to begin dealing with these claims.

For further enquiries please contact
Solomon Maruma at solomon.maruma@dalrrd.gov.za , telephone 012 310 6588
Edith Mokgoko at Edith.mokgoko@dalrrd.gov.za , telephone 012 310 6573

Yours faithfully

MS. C. BENYANE
CHIEF DIRECTOR
OFFICE OF THE REGIONAL LAND CLAIMS COMMISSION
GAUTENG PROVINCE
DATE: 25/10/2024

COMMISSION ON RESTITUTION OF LAND RIGHTS

OFFICE OF THE REGIONAL LAND CLAIMS COMMISSIONER: GAUTENG
No. 9 Bailey Lane, Arcadia, 0007 | Private Bag X 03, Arcadia, 0007
Tel: (012) 310 6500 | Fax: (012) 323 0312

Enquiries: Ms Desiree T Kgole
Telephone: (012) 310-6500/6578

Other claimants who also lodged their claims on **VLAKFONTEIN 161 IR**

R/3/116/260/51363	MAHLANGU SONGANE FELIX	2015-03-06
R/3/117/261/130849	MOKOENA JABULANE WILLIAM	2016-02-16

© 2025 Kongiwe Environmental (Pty) Ltd

Appendix C3: Consultation Materials

© 2024 Kongiwe Environmental (Pty) Ltd

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.

© 2024 Kongiwe Environmental (Pty) Ltd

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.

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 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.

© 2024 Kongiwe Environmental (Pty) Ltd

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^3 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^3.
- Water must be returned to process, from the Withok RWD at a rate of up to 9 800m^3/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.

LOCALITY

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.

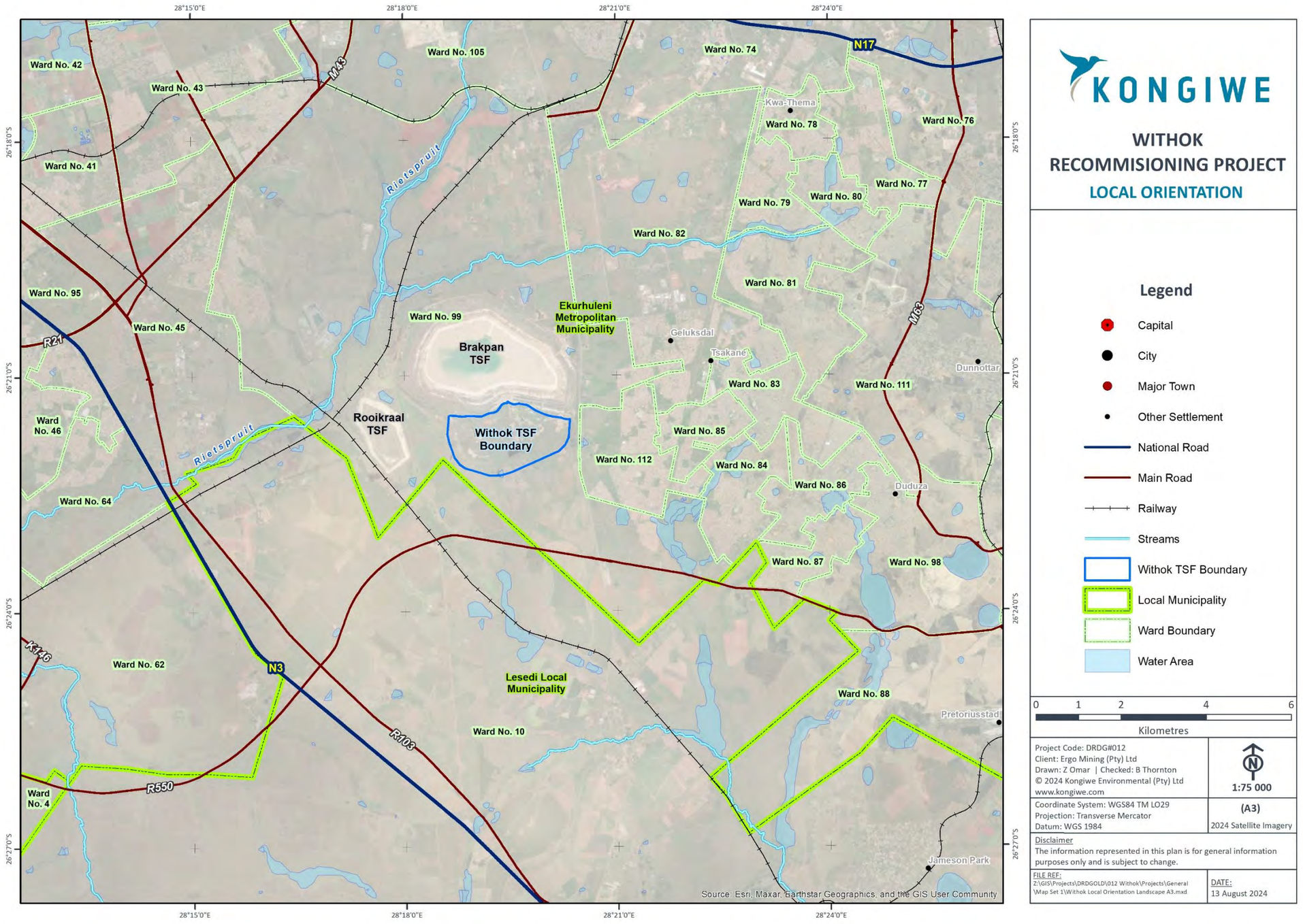
The extent of the current Withok TSF footprint is approximately 400 hectares. Refer to Table 1 for a list of the directly affected properties and Figure 1 for the project locality map.

© 2024 Kongiwe Environmental (Pty) Ltd

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

© 2024 Kongiwe Environmental (Pty) Ltd



KONGIWE

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

0 1 2 4 6

Kilometres

Project Code: DRDG#012
Client: Ergo Mining (Pty) Ltd
Drawn: Z Omar | Checked: B Thornton
© 2024 Kongiwe Environmental (Pty) Ltd
www.kongiwe.com

1:75 000

Coordinate System: WGS84 TM LO29
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.

FILE REF:
Z:\GIS\Projects\DRDGOLD\012 Withok\Projects\General \Map Set 1\Withok Local Orientation Landscape A3.mxd

DATE:
13 August 2024

Figure 1: Withok Locality Map

© 2024 Kongiwe Environmental (Pty) Ltd

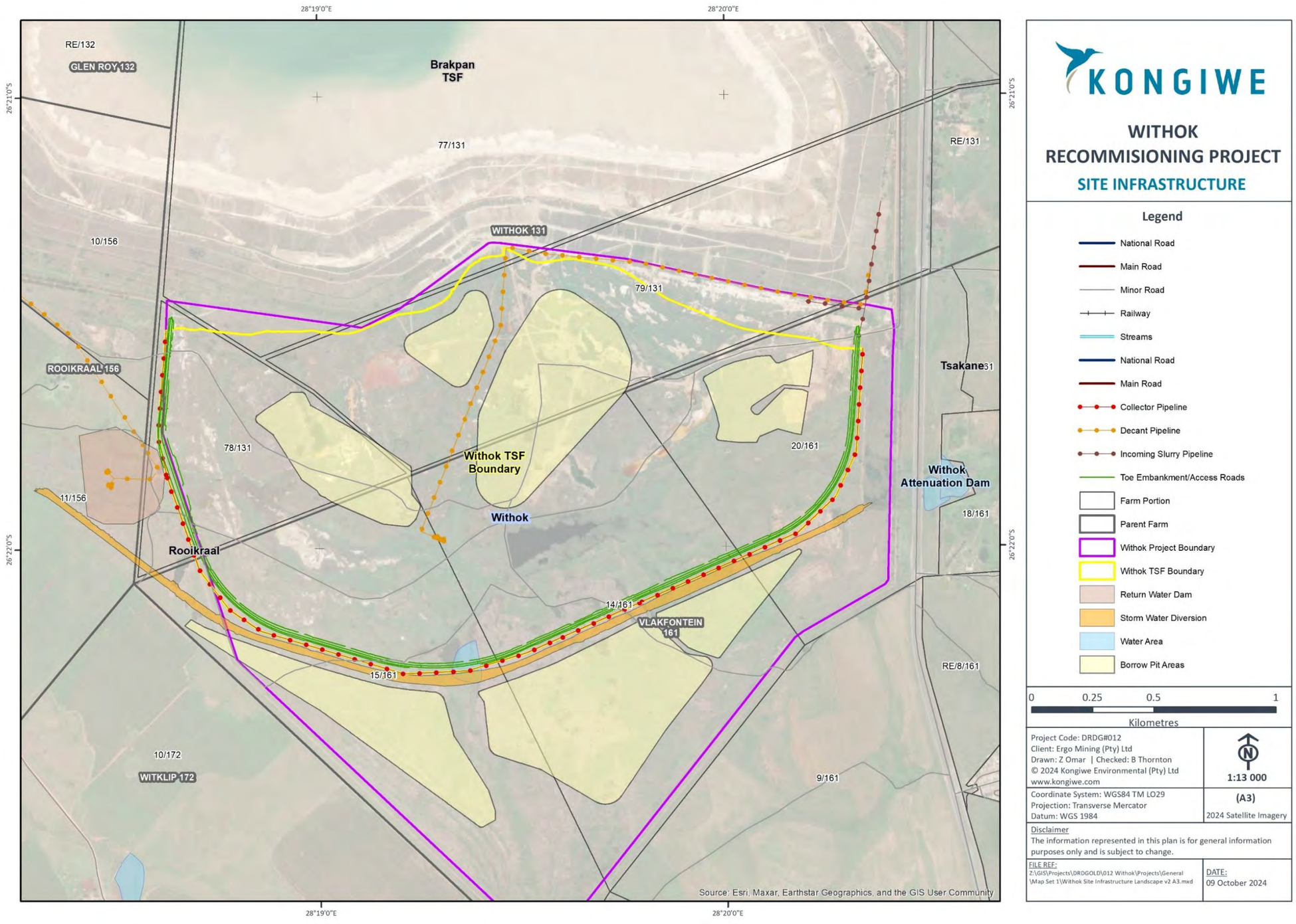


Figure 2: Project infrastructure

© 2024 Kongiwe Environmental (Pty) Ltd

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.

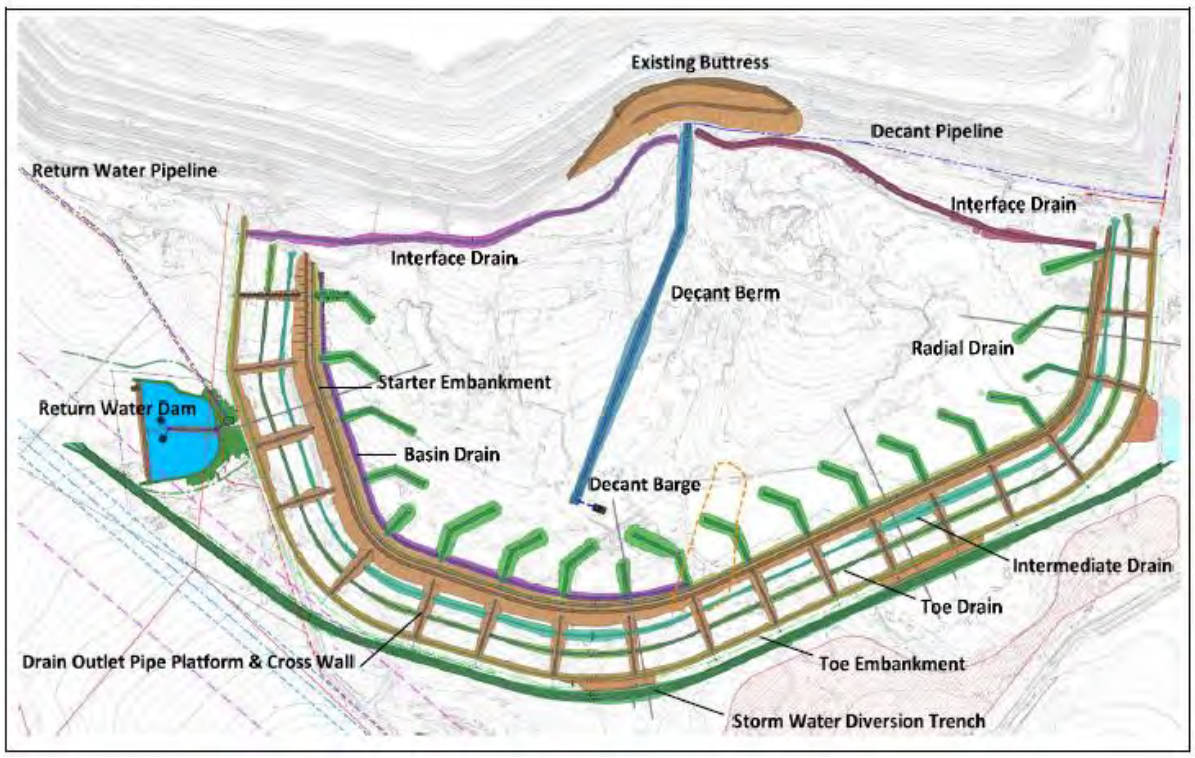


Figure 3: Pre-deposition civil works showing site infrastructure

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.

© 2024 Kongiwe Environmental (Pty) Ltd

LIFE OF OPERATION

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

REHABILITATION

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

- The side slopes will be progressively cladded. 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.

LEGISLATIVE FRAMEWORK

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[1] 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

[1] 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

© 2024 Kongiwe Environmental (Pty) Ltd

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.

© 2024 Kongiwe Environmental (Pty) Ltd

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[2]
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)

[2] 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

© 2024 Kongiwe Environmental (Pty) Ltd

Name of Activity	Aerial Extent of the Activity (ha)	Applicable listing notice	Listed Activity	Waste Management Authorisation	Water Use Licence Authorisation[2]
			(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)

© 2024 Kongiwe Environmental (Pty) Ltd

Name of Activity	Aerial Extent of the Activity (ha)	Applicable listing notice	Listed Activity	Waste Management Authorisation	Water Use Licence Authorisation[2]
Construction and operation of the Withok return water dam	Dam Size: 101 000 m^3 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; (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;		21 (g) 21(c) & (i)

© 2024 Kongiwe Environmental (Pty) Ltd

Name of Activity	Aerial Extent of the Activity (ha)	Applicable listing notice	Listed Activity	Waste Management Authorisation	Water Use Licence Authorisation[2]
			(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^3 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)

© 2024 Kongiwe Environmental (Pty) Ltd

Name of Activity	Aerial Extent of the Activity (ha)	Applicable listing notice	Listed Activity	Waste Management Authorisation	Water Use Licence Authorisation[2]
			(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.		
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—		Section 21(c) and (i)

© 2024 Kongiwe Environmental (Pty) Ltd

Name of Activity	Aerial Extent of the Activity (ha)	Applicable listing notice	Listed Activity	Waste Management Authorisation	Water Use Licence Authorisation[2]
			(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)

© 2024 Kongiwe Environmental (Pty) Ltd

Name of Activity	Aerial Extent of the Activity (ha)	Applicable listing notice	Listed Activity	Waste Management Authorisation	Water Use Licence Authorisation[2]
			(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.		
		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)

© 2024 Kongiwe Environmental (Pty) Ltd

Name of Activity	Aerial Extent of the Activity (ha)	Applicable listing notice	Listed Activity	Waste Management Authorisation	Water Use Licence Authorisation[2]
			(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.	management activity). 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).	
		GNR 984 – Activity 15	The clearance of an area of 20 hectares or more of indigenous vegetation, excluding		

© 2024 Kongiwe Environmental (Pty) Ltd

Name of Activity	Aerial Extent of the Activity (ha)	Applicable listing notice	Listed Activity	Waste Management Authorisation	Water Use Licence Authorisation[2]
			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		Section 21(c) and (i)

© 2024 Kongiwe Environmental (Pty) Ltd

Name of Activity	Aerial Extent of the Activity (ha)	Applicable listing notice	Listed Activity	Waste Management Authorisation	Water Use Licence Authorisation[2]
			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.		

© 2024 Kongiwe Environmental (Pty) Ltd

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:

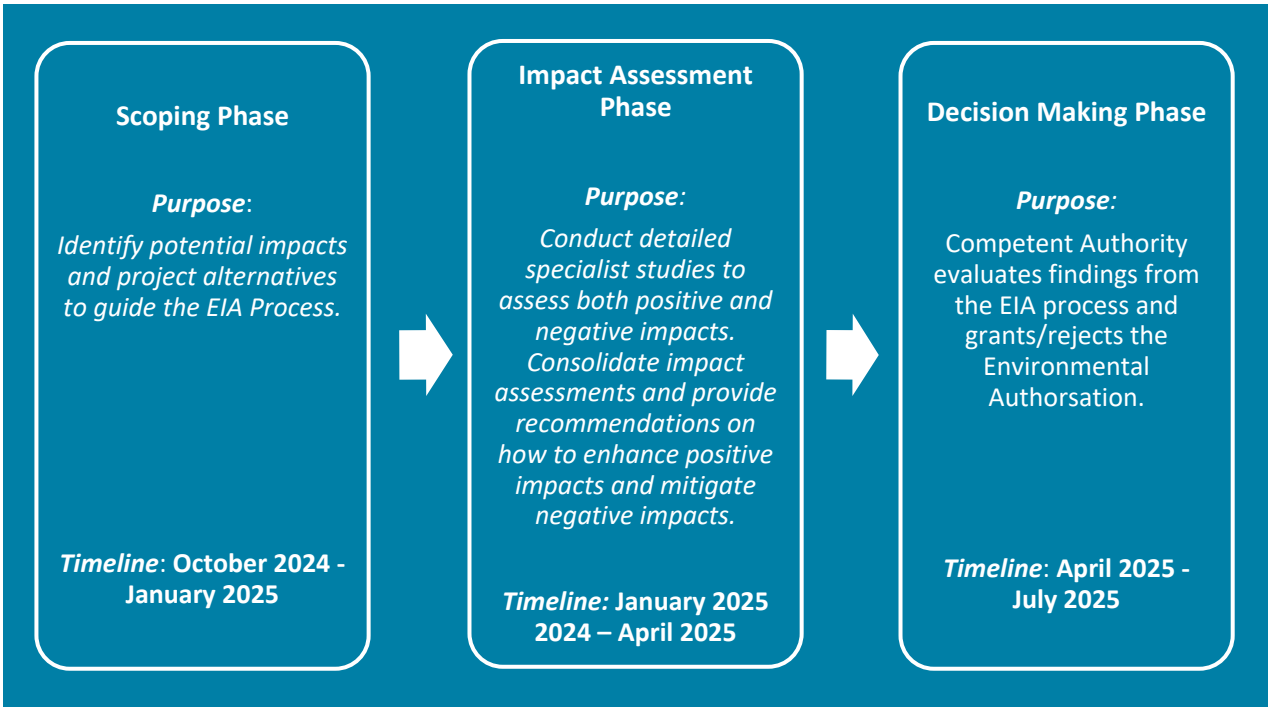


Figure 4: S& EIA process and the associated timeline

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.

© 2024 Kongiwe Environmental (Pty) Ltd

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
Public Libraries within the Withok Project Area (Scoping Report):		
Brakpan Public Library	Escombe St, Brakpan, 1541	Mr Vincent Moabelo, Libarian (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:

© 2024 Kongiwe Environmental (Pty) Ltd

Location	Physical Adress	Contact Person
Public Libraries within the Withok Zone of Influence (non-technical summary):		
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	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.

© 2024 Kongiwe Environmental (Pty) Ltd

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
Online meeting		
Wednesday, 6 November 2024	10H00 – 11H00	Microsoft teams/ scheduled Telephonic discussions
Face-to-Face meeting: Open Day		
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.

© 2024 Kongiwe Environmental (Pty) Ltd

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

- 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.

COMMENTS AND QUERIES:

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

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

Ergo Mining (Pty) Limited
Management of Tailings

Global Industry Standard on Tailings Management (GISTM)

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.

(010) 140 1726
150 Bryanston Drive, Bryanston, Sandton, 2191, South Africa
stakeholders@kongiwe.com

© 2024 Kongiwe Environmental (Pty) Ltd

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
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
Virtual meeting				
Wednesday, 6 November 2024	10H00 - 11H00	Microsoft teams/scheduled Telephonic discussions	Yes	No
Live Meeting: Open Day ***(Please indicate which time slot you would like to participate in)***				
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

© 2024 Kongiwe Environmental (Pty) Ltd

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:	

KONGIWE

THE RECOMISSIONING 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

© 2024 Kongiwe Environmental (Pty) Ltd

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.

© 2024 Kongiwe Environmental (Pty) Ltd

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^3 per year. This is equivalent to just over 10 000 m^3/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.



© 2024 Kongiwe Environmental (Pty) Ltd

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.

© 2024 Kongiwe Environmental (Pty) Ltd

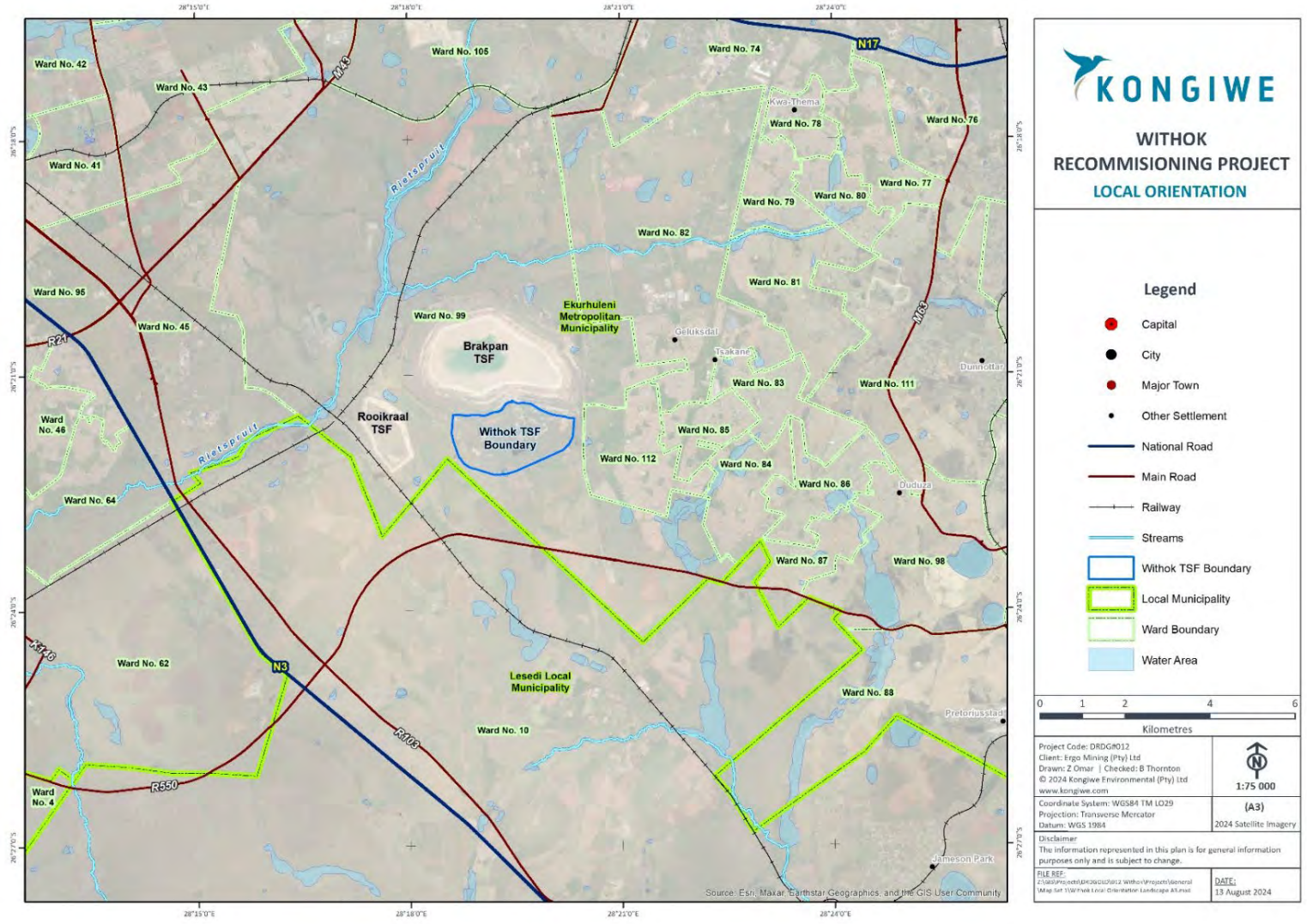


Figure 3: Project location

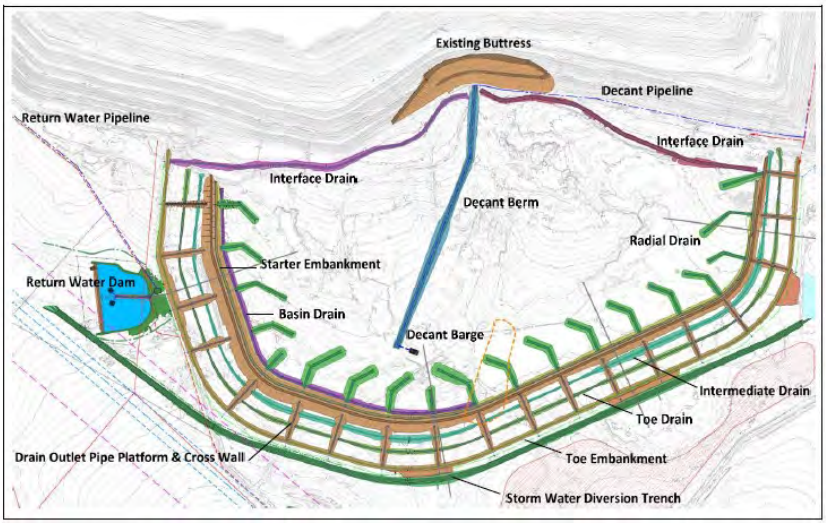
© 2024 Kongiwe Environmental (Pty) Ltd

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.



© 2024 Kongiwe Environmental (Pty) Ltd

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^3 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^3.
- Water must be returned to process, from the Withok RWD at a rate of up to 9 800m^3/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.

© 2024 Kongiwe Environmental (Pty) Ltd

Rehabilitation

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

- 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. Firstly, the cladding must contain sufficient gravel to impart "armouring" for erosion resistance (water and wind) and, secondly, the clay content and 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.

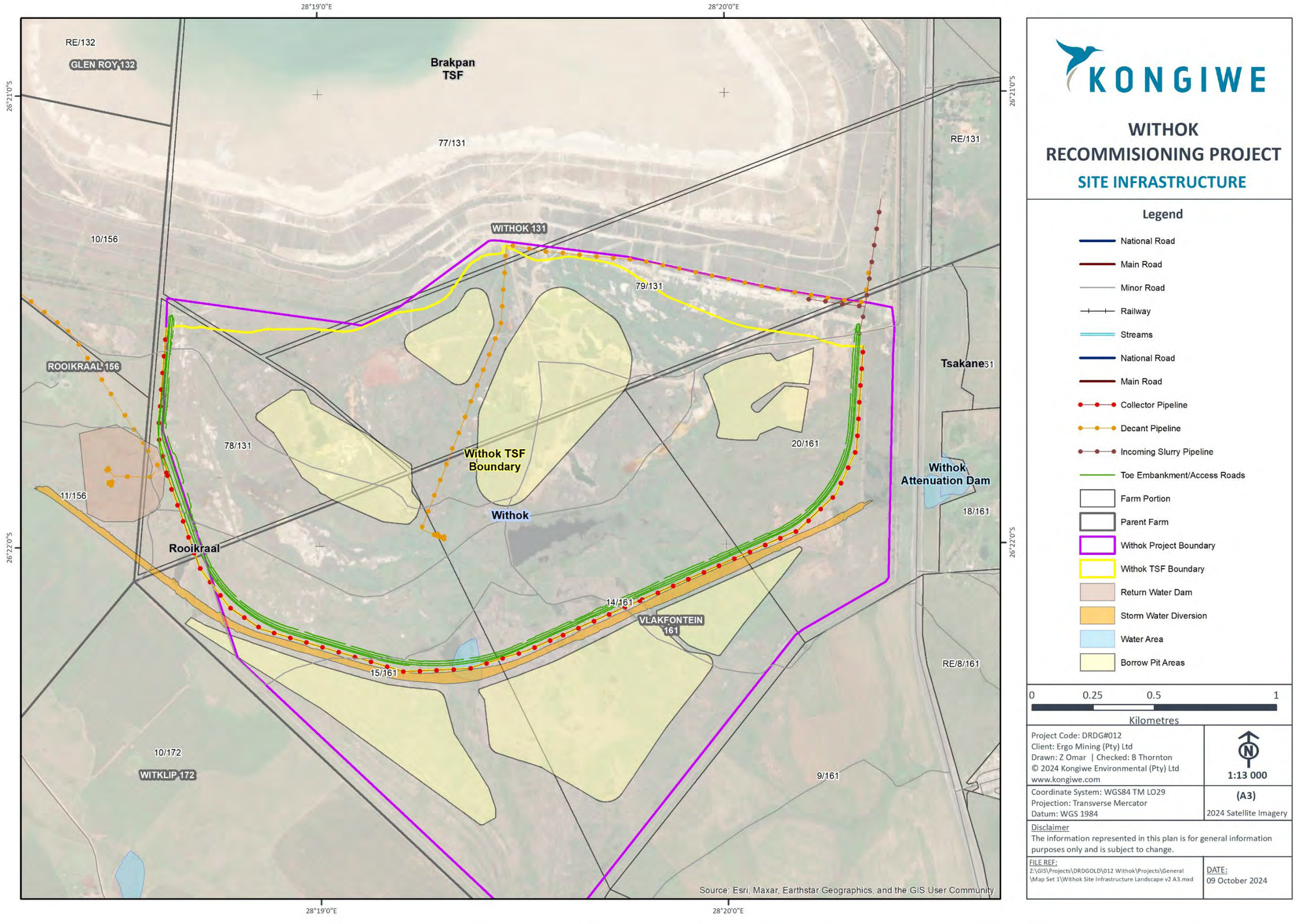


Figure 4: Project infrastructure

© 2024 Kongiwe Environmental (Pty) Ltd

Project Alternatives

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.

Environmental Authorisation Process

In terms of the environmental legislation, Ergo is required to undertake a Scoping and Environmental Impact Assessment (S&EIA) process which evaluates the environmental impacts associated with the Proposed Project as part of an Environmental Authorisation (EA). The S&EIA and specialist studies are being undertaken for the applications for the required approvals. The following applications are being made to the Department of Mineral 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[1] 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.

[1] 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

© 2024 Kongiwe Environmental (Pty) Ltd

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[2]
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^3 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)

[2] 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[2]
			(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^3 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[2]
			(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 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.	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 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).	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[2]
		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)

© 2024 Kongiwe Environmental (Pty) Ltd

Environmental Considerations

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.

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 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.

© 2024 Kongiwe Environmental (Pty) Ltd

Table 2: Potential identified impact because of the Proposed Project

Environmental Component	Component Type	Potential Impact	Specialist Study Planned for EIA
Physical Environment (non-living)	Hydrology (including wetlands, surface water and ground water)	❖ Potential for further acid mine drainage (AMD), increased heavy metal concentrations and increased sulphate concentrations in local surface and groundwater if runoff from operations is not adequately managed through efficient storm water management structures or adequate liners; ❖ Pollution of the Rietspruit and further downstream in the event of TSF breach; ❖ Water and ground contamination due to pipeline leaks/spillages if adequate preventative measures are not implemented;	Surface Water Impact Assessment Groundwater Impact Assessment Wetland Impact Assessment
Biological Environment (living)	Ecology and Biodiversity (including fauna and flora)	❖ Disturbance of site and species of ecological importance in the event of a TSF beach; ❖ 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; ❖ Displacement of animal habitat due to the reinstatement of the TSF and, in the event of a TSF breach; ❖ Long-term improvement of ecosystem health and functioning of the project area following rehabilitation.	Biodiversity Impact Assessment
Cultural Environment	Heritage Resources	❖ Should heritage resources be present in the area, the reinstatement of the TSF might disturb them. A TSF breach could potentially also impact these.	Heritage Impact Assessment
Social and Economic Environment	Employment	❖ Continued employment and job security; ❖ Continued investment in local economy;	Social Impact Assessment

© 2024 Kongiwe Environmental (Pty) Ltd

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

Overall Conclusions

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

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.

Way Forward

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

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.

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

Glossary

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.

© 2025 Kongiwe Environmental (Pty) Ltd

Appendix C4: Newspaper Advertisement



FERRARI'S Charles Leclerc claimed his second GP win of the season with a dominant display at COTA at the US GP this past weekend. | AFP

FORMULA ONE

Ferrari target constructors' following US domination

FERRARI'S last championship glory came back in 2008, but a remarkable one-two finish at the US GP has invigorated their hopes for this year's constructors' championship title.

Race winner Charles Leclerc expressed optimism for the remaining races, even as he recognised the challenge ahead with just five rounds left in the season.

Currently, McLaren hold a 40-point lead over reigning champions Red Bull, with Ferrari trailing in third place, just eight points behind. However, the Italian team made significant strides at the Circuit of the Americas, amassing an impressive 55 points.

This tally was not only their largest single weekend score of the year but also exceeded McLaren's haul by 27 points and topped Red Bull's by 26 points.

In an optimistic address, Leclerc stated, "We've got to target winning the constructors' title.

"It's an optimistic goal, but that's what we are here for. It's been a really good weekend for the team ... hopefully, at the end of the year, when we do the math, we will have won the constructors' title."

He emphasised that if they perform at their best in the remaining races, they have a shot at clinching the title, regardless of McLaren's performance.

Teammate Carlos Sainz, who finished second, echoed Leclerc's hopes, suggesting that upcoming races in Mexico and Las Vegas might favour Ferrari.

Reflecting on the unpredictability of the season, he remarked, "I'm basing myself a bit on last year. This year everything seems a bit different."

He also expressed uncertainty about the challenges that the Qatar and Abu Dhabi circuits might present, hoping their current pace continues to shine as the season concludes. Sainz is set to leave Ferrari for Williams at the end of the season to make way for seven-time world champion Lewis Hamilton.

While Ferrari celebrated their resurgence, McLaren's Lando Norris described the race as a "momentum killer" for his title challenge after a disappointing performance against Red Bull's Max Verstappen. Norris entered the race having closed the championship gap to 52 but left Texas 57 points adrift following a race where he started from pole position yet finished fourth.

Reflecting on the race, Norris acknowledged the competitiveness of Ferrari, stating, "The fact that Ferrari was so quick showed they're just as competitive."

"It was a non-successful weekend, all in all," he continued. "But we gave it a good shot. I tried. It wasn't good enough and we have work to do and I have work to do myself."

In what turned out to be a contentious race day, Norris and Verstappen found themselves embroiled in two pivotal moments — losing ground at the start due to an aggressive move and later receiving a penalty for an off-track pass that snuffed out an opportunity to contend for a podium.

Norris remarked on this experience, saying, "I respect the battle that we had. It was a good one. It was enjoyable. I think it was respectful."

He offered reflections on his own performance, suggesting that better decision-making could have altered his fortunes, stating, "If I defended better in turn one and wasn't driving like a muppet, then I should have led after turn one." | Reuters

MOTOGP

Binder rises to challenge Phillip Island in Oz fightback

OBAKENG MELETSE
meletse.obakeng@gmail.com

RED Bull KTM Factory rider Brad Binder dug deep down under to finish seventh at the Australian MotoGP, maintaining his fifth position in the championship standings amid a challenging season.

After experiencing a setback during Saturday's sprint race, which saw him crash out, Binder made a significant recovery on Sunday. Starting from the 11th position, he battled fiercely to secure his seventh-place finish, though he continued to struggle with finding the ideal setup for his bike, preventing him from keeping pace with the frontrunners.

During the main race, the South African rider reached as high as fourth place but ultimately had to contend with tyre wear that hindered his ability to maintain that position, as Ducati riders sped away ahead. Nevertheless, Binder expressed satisfaction with the adjustments made to his bike prior to the main event, even if he could not challenge for the lead as the race drew to a close.

"I tried my best from the beginning until the end," Binder remarked on the KTM website.

"This morning we put in a different aero package for the dry conditions, and the bike was turning a bit better. That was good and positive for the race, and we could try to carry a bit more speed."

Reflecting on the race's latter stages, he added, "I managed to stick with the boys for a while, but when they dropped the pace at the end, I couldn't quite go with them.



BRAD Binder claimed his 15th Top 10 finish of the season at the Australian MotoGP this past Sunday. | Red Bull

"We learned a lot this weekend, and we made another small step, but obviously we need more to get closer."

At 29, Binder also continues to lead his future teammate, Pedro Acosta, by nine points in their ongoing quest for fifth place overall. Outgoing KTM Racing team manager Francesco Guidotti is optimistic about the team's trajectory, despite some challenges in performance.

"It was a step better than yesterday's sprint race. Brad was just off the leading group and lost a bit of confidence with the rear tire in the last two laps, which stopped him from fighting for that fourth place, but it was a good race with a lot of overtaking and strong pace overall," Guidotti stated.

INDEPENDENT MEDIA

C CLASSIFIEDS

INDEX

DOMESTICS	001 - 024	LEISURE	160	PROPERTY	425 - 438
PETS	070 - 085	ENTERTAINMENT	180 - 183	ACCOMMODATION	560 - 575
MOTORS	300 - 319	MISCELLANEOUS	200 - 240	STAFF VACANCIES	601 - 654
PERSONAL	102 - 127	MOTOR SERVICES	331 - 338	LEGALS	700 - 717
HEALTH	140 - 146	ADULT ENTERTAINMENT	190 - 192	AUCTIONS	780 - 782
HOLIDAY ACCOMMODATION	160	BUSINESS	400 -413	SERVICE GUIDE	801 - 845

KWAZULU-NATAL
phone | 031 308 2004
fax | 031 308 2555
email | kzn.classifieds@inl.co.za

WESTERN CAPE
phone | 021 488 4888
fax | 021 424 9891/2
email | cape.classifieds@inl.co.za

GAUTENG
phone | 0860 115 115
fax | 011 836 0904
email | star.classifieds@inl.co.za
pta.classifieds@inl.co.za

071 PETS

WOODROCK ANIMAL RESCUE

in Gauteng cares for vulnerable dogs and cats in informal settlements, providing sustenance, hope, and healing. In 2023, they successfully nurtured over 3,500 animals through enlightenment and sterilization efforts, highlighting their strong community support. Their nourishment initiative ensures the well-being of these animals, and they seek the goodwill of supporters to continue their mission, expressing deep gratitude for any assistance.

WOODROCK ANIMAL RESCUE/ FIRST NATIONAL BANK/ ACC NUMBER: 62463902299/ BRANCH CODE: 254005/ CHEQUE ACCOUNT. REF: your name.
Explore our charming animals ready for adoption:
· Fluffy and adorable kittens and cats are in search of a loving home. Contact Zee at 061 230 0844 for adoption inquiries.
·PUPPIES: We offer a selection of charming puppies, predominantly mixed breeds, eagerly awaiting their forever families. Don't pass up the opportunity to bring home these lovely companions! Reach out at 082 925 3133 to inquire about adoption.
Cara: I was picked up in a field, and WAR has given me a bed to sleep in and food to eat. I really need a home where I can be loved and appreciated. I am a very shy girl and will need extra love.
To adopt, call 082 682 7262.
Valley : I was in an MVA. I had a pelvic reconstruction. Now I have 2 plates in my hips and a pin in my leg holding my femur together. Although I have been through so much, I am still a fun and active doggie. I am full of energy, and I long to live.
To adopt, call 082 682 7262.
Mack: I am an older boy looking for my forever home where I can have the opportunity to relax and live out my years without any worries.
To adopt, call 082 682 7262.
Chloe: I am a spunky little 2-year-old who loves affection! If I don't get your devoted love and attention, I will run around and get your attention! All eyes must be on me! I am looking for a special home that will adore me, as my owner had to surrender me as she needs to travel the world for work and not all countries allow me to visit.
To adopt, call 082 682 7262.
Woodrock is currently experiencing a considerable shortage of cat food, kitten food, dog food, puppy food, and puppy milk, which is affecting our ability to manage veterinary costs. If you can offer assistance, please reach out to Stella at 060 806 7438. Let's keep in mind the steadfast love that dogs give us and respond with equal compassion.

Looking for Garden Services?
Classifieds
To advertise please call us on
0860 115 115

105 PERSONAL

MES SOCIAL WORKER

Is looking for the biological father of Oliver Shrosbree (M) born 08/08/2014 and Riley Shrosbree (F) born 25/09/2011.
Call Lizzie 011 023 4500.

105 PERSONAL

Julanda Van Staden (35) Contact Susan Wasserman (083 268 6650) regarding the adoption of baby girl born 15/03/2023, left in Baragwanath hospital.

105 PERSONAL

MES SOCIAL WORKER

Is looking for the biological parents of Xolani Mbulawa (M) born 23/07/2012 and Ashley Mbulawa (F) born 13/08/2008.
Call Lizzie 011 023 4500.

105 PERSONAL

MES SOCIAL WORKER

Is looking for the biological father of Zinhle Rantsho (F) born 21/10/2010 and Nqobile Rantsho (F) born 27/01/2014.
Call Lizzie 011 023 4500.

There's PROMISE in Classified advertising

Classified advertising provides the jobs you need when you need them.

Whether you are looking to advance your career or find the perfect employee classified promises the most reliable market place for investing in the future

Classifieds
0860 115 115

191 ADULT ENTERTAINMENT



710 LIQUOR ACT

OKUHLE ZWAVHUDI

GAUTENG LIQUOR ACT, 2003 (ACT NO. 2 OF 2003)

NOTICE OF APPLICATION IN TERMS OF SECTION 24

Notice is hereby given that it is the intention of the person whose details are set out below to lodge an application for TAVERN, to the Secretary of the Local Committee of EKURHULENI, situated at STD BANK BUILDING, 3RD FLOOR, PRESIDENT STREET, GERMISTON, on: 2024-11-01, Province: Gauteng.
1. Full Names of the Applicant: MPHO RAMABULANA
2. Intended Trading Name: OKUHLE ZWAVHUDI
3. ID Number OR Registration Number of the Applicant: 8503180822087
4. Full Address and Location of the Premises: ERF 21860 PALM RIDGE EXTENSION 10
* City / Suburb / Town / Township where Premises located: KATLEHONG
5. Type of License Applied for: TAVERN
6. Names and nature of educational institutions within a radius of 1 kilometer from the premises in paragraph 4: NONE
7. Names and distances to similar licensed premises within a radius of 1 kilometer from the premises in paragraph 4: NONE
8. Places of worship within a radius of 1 kilometer from the premises in paragraph 4: NONE
THOZAMA NQEBE
936 SIBANZA CRESCENT SPRUITVIEW, 1431
TEL: 078 218 9036
thozamanqebe05@gmail.com

711 LOST DEED

LOST OR DESTROYED DEED

FORM JJJ

Notice is hereby given in terms of Regulation 68 of the Deeds Registries Act, 1937, of the intention to apply for the issue of a certified copy of the title deed held under **Deed of Transfer Number T7775/1978**, passed by the registered owner of the below mentioned property being **ESSOP MOHAMED, Identity Number: 261101 5040 08 4, Unmarried**, in respect of the property, more fully described as **ERF 258 AZAADVILLE TOWNSHIP, REGISTRATION DIVISION I.Q., THE PROVINCE OF GAUTENG, MEASURING 317 (THREE HUNDRED AND SEVENTEEN) SQUARE METRES, HELD BY DEED OF TRANSFER NUMBER T7775/1978**.
All persons having objection to the issue of such copy are hereby required to lodge the same in writing with the Registrar of Deeds at Johannesburg within two weeks from the date of the publication of this notice.
DATED at JOHANNESBURG this 17TH day of OCTOBER 2024
Applicant:
MOHAMED ZUNEID OSMAN
29 NORTHERN PLACE EXTENSION 1 LENASIA
Telephone: (011) 852 4752
E-mail: zuneidosman@mweb.co.za
Conveyancer
MOHAMED ZUNEID OSMAN
LEGAL PRACTICE COUNCIL MEMBERSHIP NUMBER M04566)


For all your Legal Advertising
Classifieds
0860 115 115

FORM JJJ

LOST OR DESTROYED TITLE DEED

Notice is hereby given in terms of Regulation 68 of the Deeds Registries Act, 1937, of the intention to apply for the issue of a certified copy of **Deed of Transfer T73650/2001**, passed by **SUSANNA PETRONELLA MAGRIETA VAN WYK, Identity Number: 220717 0040 08 2, Married out of community of property**, in favour of **MAGRIETTA SUSANNA STEYN, Identity Number: 520511 0035 08 6, Widow**, her heirs, executors, administrators or assigns in full and free property: **ERF 678 ROODEKRANS EXTENSION 3 TOWNSHIP, RIGISTRATION DIVISION I.Q., THE PROVINCE OF GAUTENG, MEASURING 1 248 (ONE THOUSAND TWO HUNDRED AND FORTY EIGHT) SQUARE METERS; Held by DEED OF TRANSFER NUMBER T73650/2001**, which has been lost or destroyed.
All interested persons having objection to the issue of such copy are hereby required to lodge the same in writing with the Registrar of Deeds at JOHANNESBURG, Corner Von Wielligh Street and Rahima Moosa Street, Johannesburg, 2001, within two weeks from the date of the publication of this notice.
DATED at Johannesburg this day of 18 October 2024
DUNN HIRSCHOWITZ
C/O HIRSCHOWITZ FLIONIS ATTORNEYS
UPPER GROUND LEVEL
8 ARNOLD ROAD
ROSEBANK
E-mail Address: petunia@hfattorneys.co.za
Contact Number: 011 880 3300

FORM JJJ

LOST OR DESTROYED DEED

Notice is hereby given in terms of Regulation 68 of the Deeds Registries Act, 1937, of the intention to apply for the issue of a certified copy of the title deed held under **Deed of Transfer Number T7775/1978**, passed by the registered owner of the below mentioned property being **ESSOP MOHAMED, Identity Number: 261101 5040 08 4, Unmarried**, in respect of the property, more fully described as **ERF 258 AZAADVILLE TOWNSHIP, REGISTRATION DIVISION I.Q., THE PROVINCE OF GAUTENG, MEASURING 317 (THREE HUNDRED AND SEVENTEEN) SQUARE METRES, HELD BY DEED OF TRANSFER NUMBER T7775/1978**.
All persons having objection to the issue of such copy are hereby required to lodge the same in writing with the Registrar of Deeds at Johannesburg within two weeks from the date of the publication of this notice.
DATED at JOHANNESBURG this 17TH day of OCTOBER 2024
Applicant:
MOHAMED ZUNEID OSMAN
29 NORTHERN PLACE EXTENSION 1 LENASIA
Telephone: (011) 852 4752
E-mail: zuneidosman@mweb.co.za
Conveyancer
MOHAMED ZUNEID OSMAN
LEGAL PRACTICE COUNCIL MEMBERSHIP NUMBER M04566)

715 SALE IN EXECUTION

IN THE COURT OF SOUTH AFRICA LIMPOPO LOCAL DIVISION, THOHOYANDOU.

CASE NO: 1814/2023

In the matter between:

MUKELA CLIFF MKHABELA
EXECUTION CREDITOR

And

MINISTER OF POLICE
EXECUTION DEBTOR

NOTICE OF SALE IN EXECUTION

PURSUANT TO the Judgement of High Court of South Africa Limpopo Local Division, Thohoyandou with Court Order given on the 27TH FEBRUARY 2024, the undermentioned goods will be sold at 11:00 on the 13TH NOVEMBER 2024 by a public auction at 7th FLOOR WACHTHUIS, 231 PRETORIUS STREET, PRETORIA.

60 x LAPTOPS
60 x MICROWAVES

CONDITIONS
The goods are sold to the highest bidder for cash. The buyer pays VAT when applicable.

ENQUIRIES: THE SHERIFF PRETORIA CENTRAL
424 PRETORIOUS STREET
MR AC GREYLING
078 115 9145
010 054 6373
Email: OfficeManager@sheriffpretoracentral.co.za

DATED AT THOHOYANDOU ON THIS THE 16TH DAY OF OCTOBER 2024.

BALOYI N WALTER ATTORNEYS
ATTORNEYS FOR THE PLAINTIFF
OFFICE NO 02, 1ST FLOOR,
MUNAKA-MADILONGE MEDICAL AND MARTENITY CENTRE
670 MPHEPHU DRIVE
THOHOYANDOU P-WEST
P.O BOX 3897
THOHOYANDOU 0950
TEL: 015 962 0339/
FAX: 0867672718
EMAIL: info@bnwattorneys.co.za
REF: BM0075/CIV/NW

Looking for Garden Services?

Classifieds Service Guide
To advertise please call us on
0860 115 115

717 TENDERS

NWU®
NORTH-WEST UNIVERSITY
NOORDWES-UNIVERSITEIT
YUNIBESITI YA BOKONE-BOPHIRIMA

The North-West University invites all specialist contractors with the relevant skills, experience, and resources to submit tenders for the following projects at the Vanderbijlpark Campus:

NWUTP238-2024VC: REPLACEMENT OF ROOF STRUCTURE AND CEILING, BUILDING E4, VANDERBIJLPARK CAMPUS

Scope of work for the replacement roof of Optentia House includes general renovations, carpentry & joinery, roof sheeting, ceiling and electrical work.
CIDB Grading – 3 GB or higher

Tenderers can access tender documents by visiting: www.nwu.ac.za/nwu-tenders

Access to the tender documents link closes: 06 NOVEMBER 2024 at 12:00
Closing date and time for tender submissions: 20 NOVEMBER 2024 at 23:59

The University reserves the right to accept any tender, irrespective of price, or no tender at all.

TR238_2024NW

It all starts here®

700 LEGALS

717 TENDERS

PSSPF
PRIVATE SECURITY SECTOR PROVIDENT FUND

INVITATION TO TENDER FOR PSSPF FUNERAL BENEFITS

The Private Security Sector Provident Fund (PSSPF) calls for bids from experienced, suitably qualified and competent service providers to underwrite and administer the funeral benefits of 260 000 PSSPF members.

Closing Date:
4 November 2024 at 12:00 noon

All interested parties should visit the PSSPF website @ www.psspfund.co.za for more information. Tender Reference no: **RFT REFERENCE NO: PSSPF/02/24.**

700 LEGALS

717 TENDERS

718 TOWN PLANNING

The Registered Owner/s,

SJ WEALTH (PTY) LTD, plans to demolish all existing structures on: 3 (Portion 3 of Erf 160, Northcliff & Erf 3850, Northcliff Ext. 1) Hearn Drive, Northcliff. The present structure/s are to make way for four new townhouses on the property.
Any interested and/or affected party who wishes to comment on the HERITAGE aspect of this property, is invited to do so in writing to the Provincial Heritage Resource Authority at: Private Bag X33, Johannesburg, 2000, Facsimile (011) 355 2513 or by email to: **Tebogo.molokomme@gauteng.gov.za, Noluthando.cembi@gauteng.gov.za & lesego.ramela@gauteng.gov.za** with a copy to: Alan Mason **amason@lantic.net** – (082) 458-3794.
Closing date for comments is: **21st November 2024**

There's POWER in Classified advertising

Classified is a powerful resource for connecting buyers and sellers.

Whether it's a new car, a new house or new job -

CLASSIFIED can fill those needs!

Classifieds
0860 115 115

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: Vosloruus 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
Virtual Meeting		
Wednesday, 6 November 2024	10H00 - 11H00	Microsoft teams/scheduled Telephonic discussions
Live Meeting: Open Day *(Please indicate which time slot you would like to participate in)*		
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**

KONGIWE

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

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: Vosloruus 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
Virtual Meeting		
Wednesday, 6 November 2024	10H00 - 11H00	Microsoft teams/scheduled Telephonic discussions
Live Meeting: Open Day *(Please indicate which time slot you would like to participate in)*		
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**

KONGIWE

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

MAMA ALEENA
FOR RELATIONSHIP AND LOVE SPELLS
Spiritual/Native Healing • Marriage Spells • Divorce Spells • Return Ex Lover • Diabetes • High Blood Pressure • Do you have Cancer? • Male related Problems • Want to boost your business?
Do you feel you have no future • Have you lost the zeal for life • Are you consistently afflicted by bad luck • Do you seek success, power,fulfillment and happiness at home or at work • Do you seek protection, security, peace of mind • Do you seek to revenge, retribution, want to even the score
Make a change of your life today by contacting me immediately and I help you. I work with bothphysical and long distance assistance & healing for clients
0719 078 940

BABA MIKE
UDINGA USIZO? UNGALUTHOLA NANGU UZOKUSIZA UBABA MIKE
Abanezinkinga zemali nothando ngidume wonke umhlaba. Ngisiza abantu ngomuthi wami, iphindululu yakho kade uhlupheka
Ukubuyisa isithandwa sakho in 45 mins, imali esheshayo in 55 mins, imali engena ebank lakho in 45 mins, imali engena esikhwameni nasendlini.
Amagundane alanda imali nge45 mins, sula isikweleto sakho nge30 mins. Ngena esitolo ubuye nemali, pasa esikolweni nokunye okuningi kwenziwa in 30 mins kuphela
Nokunye okuningi kukhona, inkanyiso yakho R340, ningabuza akunankinga. IBheka mina ngedwa, ukukhulisa ubudoda bakho, khipha amanzi ngaphansi komama
CALL OR WHATSAPP
073 633 9175

Kwa Beto Chemisi yesintu eisleni to Las Vegas Shopping Centre
• Isnyama Mix
(Remove Everything Same time)
• Inhlanhla Combo
(Umsebenzi • Indoda engakuphi imali)
• Umvusa Nkunzi (Man Power)
Powder & Liquid imbiza
• Umuzi Onezinkinga
(Isiqinisa muzi, sikhipa isitha ekhaya, Sibusisa uthando emndenini)
Combo yesinyama neschitho
Isiwasho semali, umsebenzi, umshado, sikhipha isinyama, ischitho ne sikhwakhwalala
Imbiza yokuwasha igazi, amathambo, idliso, nezinyawo ezibuhlungu, iyasiza nageslumo nomuntu ongatholi abantwana
Combo yesinyama/ yokuphakamisa umoya/ Ivile amaphupho
Isiwasho samandla, nemimoya, siphinde sikusize ngesithunywa, namaphupho bese sibuyise izinhlanhla zakho
060 402 2635 • 079 186 3868

MR BIGS
PENIS ENLARGEMENT
MENS HEALTH PRODUCTS
FROM 18 TO 75 YEARS
Order yours now strictly through WhatsApp.
068 764 2904
AVAILABLE IN EKURHULENI

BRIAN HAIR SALON
WITH MORE THAN 15 YRS EXPERIENCE
OUR SERVICES
• BRAIDS
• HAIRCUTS
• RELAX
• HAIR WASH
• BLOW
• PERM
• ETC.
10758 CNR LOBEDU & NARENG STR, DION
083 890 9922

DR. MAMA PRINCESS
BEST HERBAL SOLUTION FOR WEAK MENS AND ENHANCEMENT 3 IN 1 PENIS COMBO, SIZE LENGTH AND THICKNESS, STOP EARLY EJACULATIONS, PENIS ENERLARGEMENT, STRONG ERECTION AND WEMENS PROBLEMS WHO DON'T GIVE BIRTH
CALL DR. MAMA PRINCESS ON DIRECT CALL OR WHATSAPP
073 462 5885

LESSONS
Brenda Black Swim Schools
www.brendablackswimschools.co.za
BRENDA BLACK SWIM SCHOOLS
DAWN PARK
www.brendablackswimschools.co.za
Dawn Park 23 Ferrari Road
TRANSPORT AVAILABLE
R550 Per Month
INDOOR HEATED POOLS
All ages including pensioners
Contact: Alex +27 78 158 2390 / Brenda 078 668 1987
alex@brendablackswimschools.co.za

Ekurhuleni News
We Are Hiring
FIELD AGENTS
JOIN US
AROUND EKURHULENI
CONTACT 011 045 3643 | 081 278 6052 | 068 328 2424

WEED KILLER
IKILLA UKHULA
R180
PLACE YOUR ORDER NOW ON 081 086 2486

FOR RENT
DO YOU NEED A HOUSE TO RENT,
PRICE AT ONLY R8000 PM
JAMES 063 1254 595
SARAH 065 8398 508
ADDRESS
126 8TH STREET
BOKSBURG NORTH

GOGO MALAWI
Strong muthi 100% Success with money back guaranteed.
* I can remove bad luck,
* Bring back lost lover,
* Fix Marriage,
* Clear Debts,
* Financial breakthrough, x2 Salary,
* All unfinished jobs.
SAME TIME RESULTS
CALL 060 332 3431
WHATSAPP 0686691362
IT IS STILL THE CUSTOMER'S DUTY TO INVESTIGATE THE CREDENTIALS OF ANY ADVERTISING THEY DEAL WITH. EKURHULENI NEWS PROVIDES A SERVICES TO PROMOTE GOODS AND SERVICES. WE CANNOT BE HELD LIABLE FOR ANY HARM, FLASE ADVERTISING OR MONEY LOSS

Madlanduna Carwash
3736 Eliselen Street
Etwatwa East
Daveyton
1520
0673695315

Ekurhuleni News FOLLOW US ON
SOCIAL MEDIA

CALLING ALL VISIONARIES:
UNLOCK YOUR ARTISTIC POTENTIAL AND GAIN EXPOSURE WITH Ekurhuleni News
PURPOSE
WE ARE INVITING PEOPLE TO COME AND SHARE THEIR STORIES. IT COULD BE PERSONAL STORIES, EXPERIENCES,OR ACHIEVEMENTS.
TOPICS
INSPIRATIONAL JOURNEYS —> HIGHLIGHT PERSONAL ACHIEVEMENTS,WHETHER BIG OR SMALL, THAT SERVE AS A SOURCE OF INSPIRATION FOR OTHERS. THIS COULD INCLUDE OVERCOMING PERSONAL STRUGGLES, ACHIEVING ACADEMIC OR
YOUTH PERSPECTIVE : THE AIM IS TO CREATE A SPACE FOR YOUNGER GENERATION TO EXPRESS THEIR VIEWS, DREAMS, AND ASPIRATIONS. THIS COULD INCLUDE STORIES OF PERSONAL GROWTH, EDUCATIONAL ACHIEVEMENTS ,OR INNOVATIVE PROJECTS THROUGH MZANSI LET'S WEAVE A TAPESTRY OF STORIES THAT REFLECT THE RESILIENCE, STRENGTH, HARDWORKING , AND BEAUTY OF THE PEOPLE OF SOUTH
FIND US AT: 011 045 3643 | 081 278 6052 • 081 086 2486 MEDIA@EKURHULENINEWS.CO.ZA

SAMORA MOTOR SPARES
ETWATWA | NEXT TO LAS VEGAS TAXI RANK
VAT #: 4060111154 | TAX #: 9111600145
SAMARAMSPARES@GMAIL.COM
P.O.BOX X44
ETWATWA EAST
DAVEYTON | 1520
OPERATIONS MANAGER
ANDRE MBAZIMA
082 580 1718 | 011 962 1138
INFO@EKURHULENINEWS.CO.ZA
www.ekurhuleninews.co.za

© 2025 Kongiwe Environmental (Pty) Ltd

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)

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.

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

A hard copy of the DSR non-technical summary will be made available at the following public places: Vosloruus 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, Mayerton, 1960.

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

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

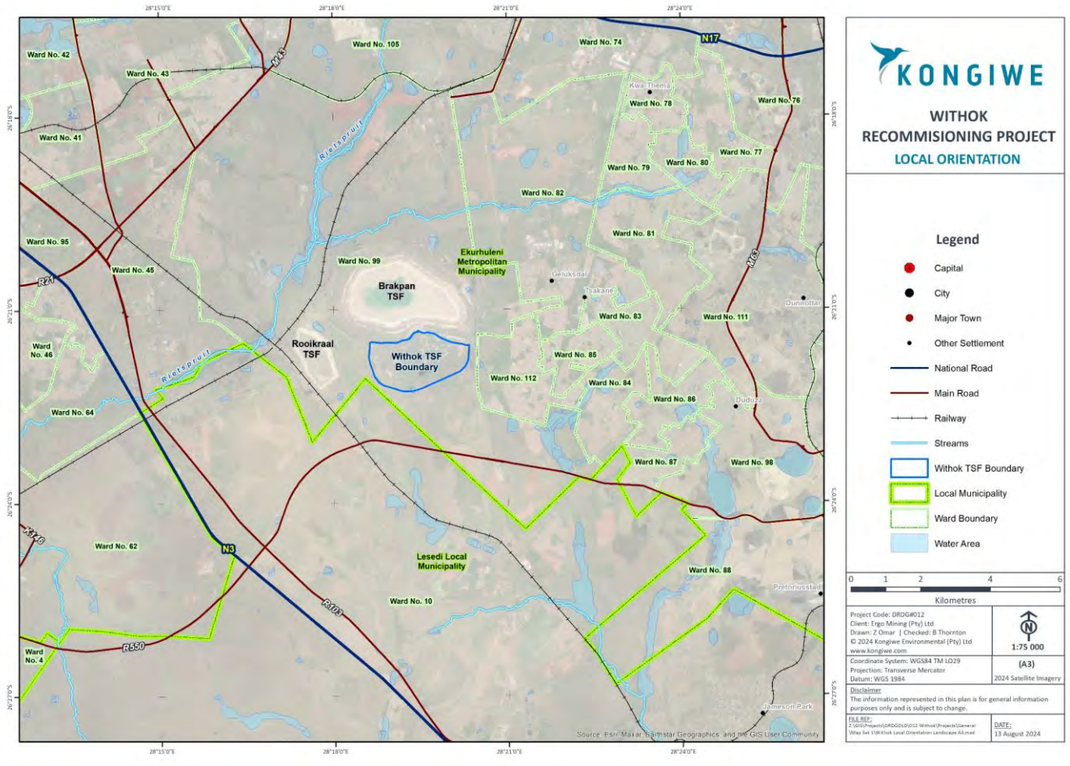
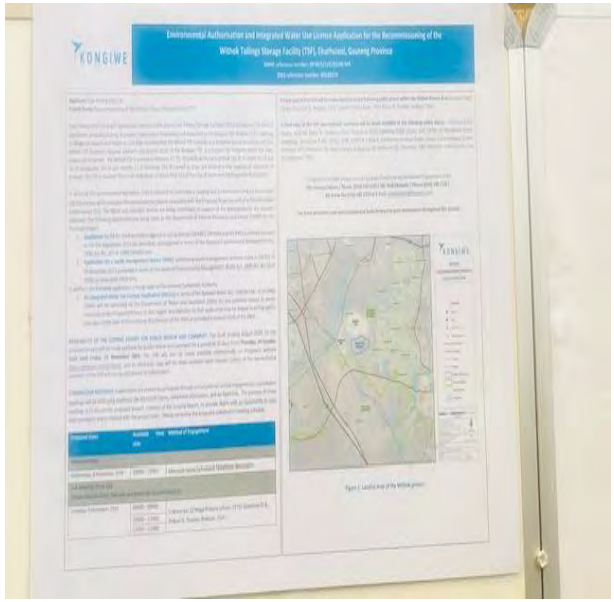


Figure 1: Locality map of the Withok project.

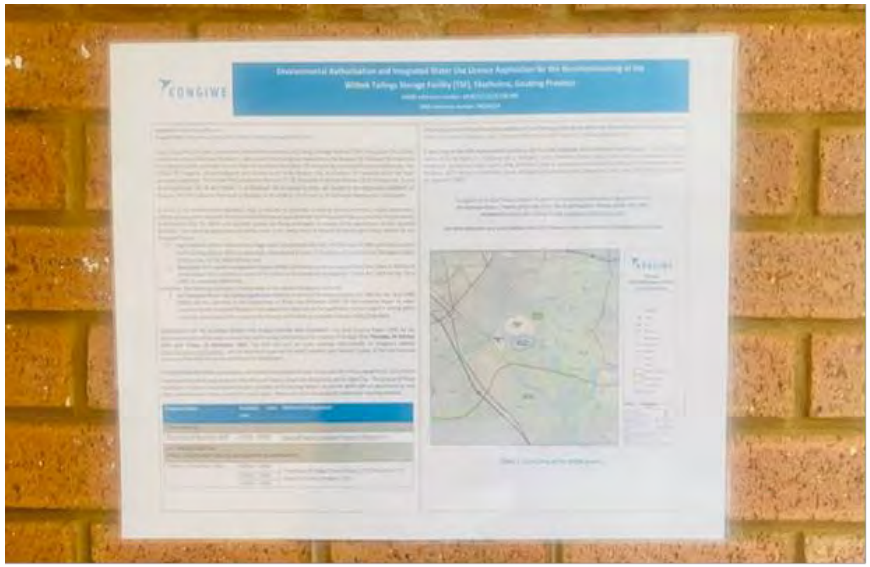
© 2024 Kongiwe Environmental (Pty) Ltd

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

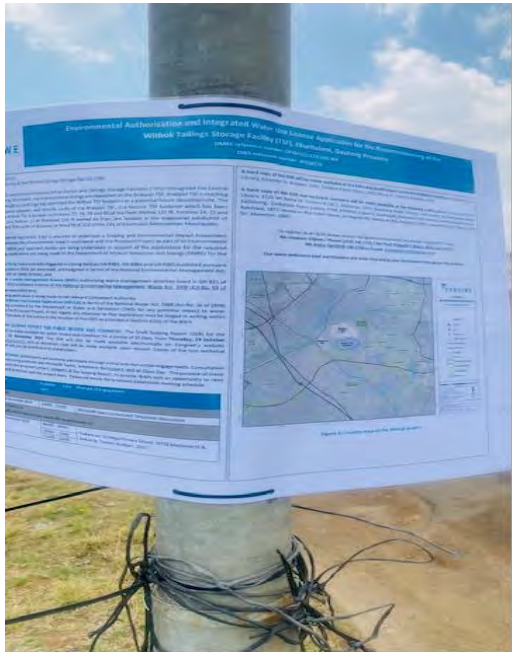
Site Notice Placement Report - Thursday, 24 October 2024 – 31 October 2024

Site Notice Number	Location	Co-ordinates	Photo	
1.	Brakpan Library	26.23037^{0}S 28.36647^{0}E		

© 2024 Kongiwe Environmental (Pty) Ltd

Site Notice Number	Location	Co-ordinates	Photo	
2.	Tsakane Library	26.35340^0 S 28.38228^0 E		

© 2024 Kongiwe Environmental (Pty) Ltd

3.	Intersection of Geluksdal Rd and Heidelberg	26.34082^{0}S 28.34094^{0}E		

© 2024 Kongiwe Environmental (Pty) Ltd

4.	The intersection of Tsakane St and Heidelberg	26.35391^0 S 28.34382^0 E		

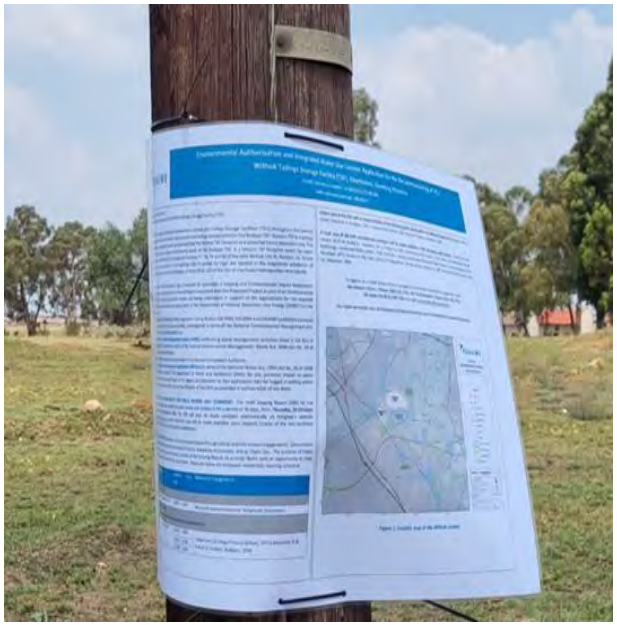
© 2024 Kongiwe Environmental (Pty) Ltd

5.	Heidelberg Rd	26.36136^{0}S 28.35060^0 E		

© 2024 Kongiwe Environmental (Pty) Ltd

6.	Dirt Road connecting with Heidelberg Rd	26.36009^{0}S 28.34408^{0}E		

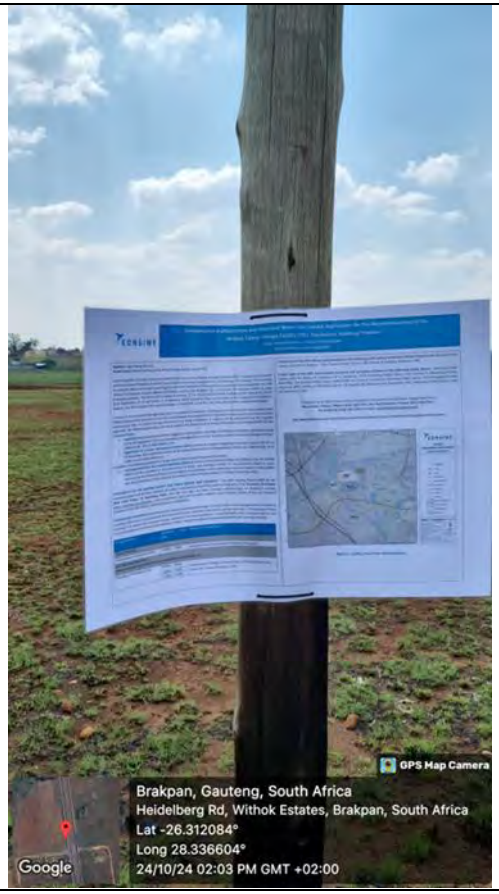
© 2024 Kongiwe Environmental (Pty) Ltd

7.	Heidelberg Rd	26.348933^{0}S 28.341905^{0}E		

© 2024 Kongiwe Environmental (Pty) Ltd

8.	Heidelberg Rd	26.31867^{0}S 28.337836^{0}E		

© 2024 Kongiwe Environmental (Pty) Ltd

9.	Heidelberg Rd	26.312084^{0}S 28.336604^{0}E			

© 2024 Kongiwe Environmental (Pty) Ltd

10.	Magagula Primary School	26.420792^{0}S 28.19683^{0}E		

© 2024 Kongiwe Environmental (Pty) Ltd

11.	Bronkhorst Rd	26.372452^{0}S 28.254745^{0}E			

© 2024 Kongiwe Environmental (Pty) Ltd

12.	N3 Livestock Traders	26.374864^{0}S 28.246688^{0}E			

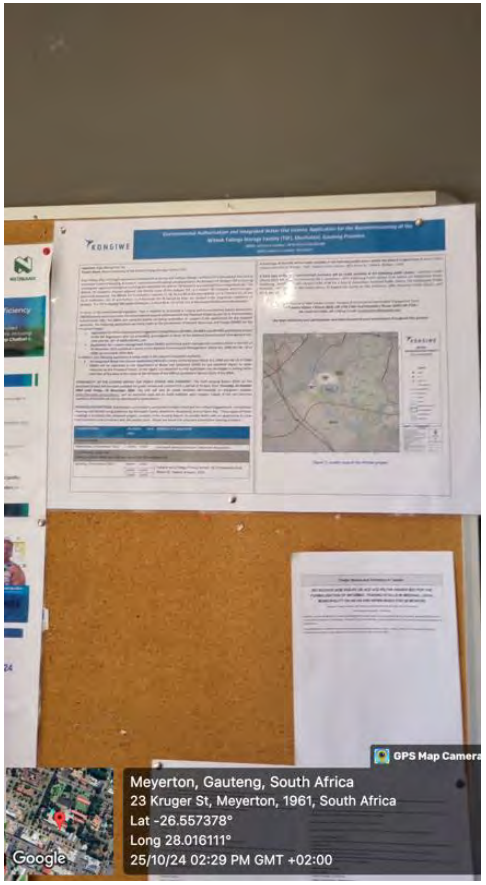
© 2024 Kongiwe Environmental (Pty) Ltd

13.	Daleside, Witkopdorp	26.490811^{0}S 28.067457^{0}E		

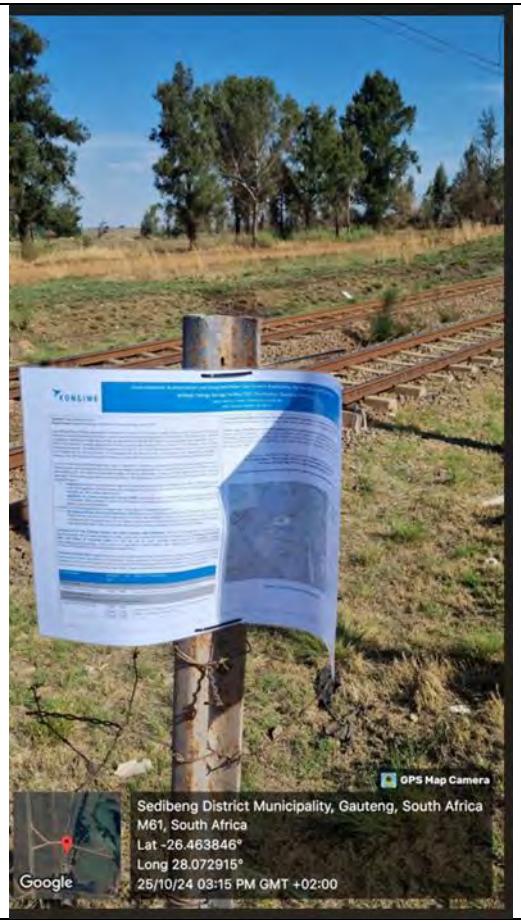
© 2024 Kongiwe Environmental (Pty) Ltd

14.	Plot 43	26.552305^{0}S 28.06965^{0}E			

© 2024 Kongiwe Environmental (Pty) Ltd

15.	Meyerton Library	26.557378^{0}S 28.016111^{0}E			

© 2024 Kongiwe Environmental (Pty) Ltd

16.	Synag Dairy 1	26.463846^{0}S 28.072915^{0}E			

© 2024 Kongiwe Environmental (Pty) Ltd

17.	Duiker Rd	26.473143^{0}S 28.074864^{0}E		

© 2024 Kongiwe Environmental (Pty) Ltd

18.	Senta Fe Blvd	26.443931^{0}S 28.072452^{0}E			

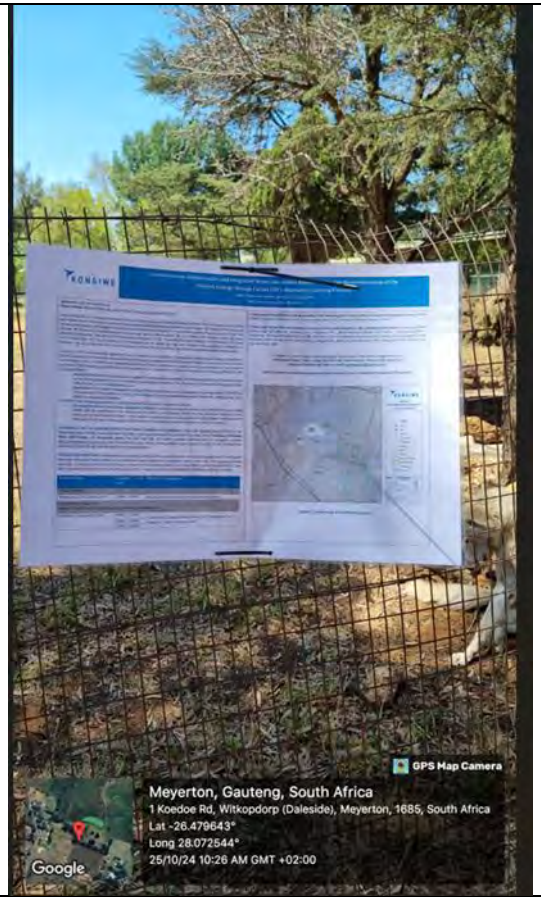
© 2024 Kongiwe Environmental (Pty) Ltd

19.	Willow Brooke Wedding and country venue	26.452682^{0}S 28.071847^{0}E			

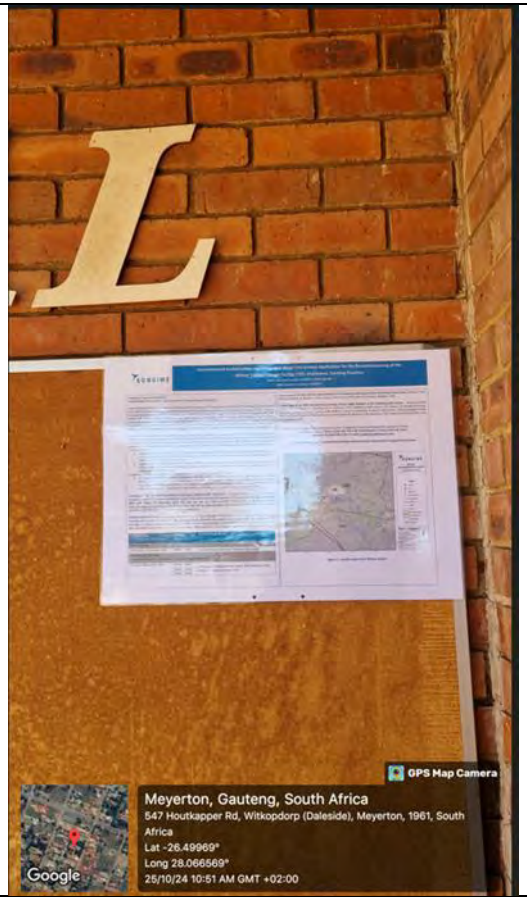
© 2024 Kongiwe Environmental (Pty) Ltd

20.	Midvaal Wastewater Treatment Works	26.582442^{0}S 27.969721^{0}E			

© 2024 Kongiwe Environmental (Pty) Ltd

21.	The Potted Olive Edible Garden Centre	26.479643^{0}S 28.072544^{0}E			

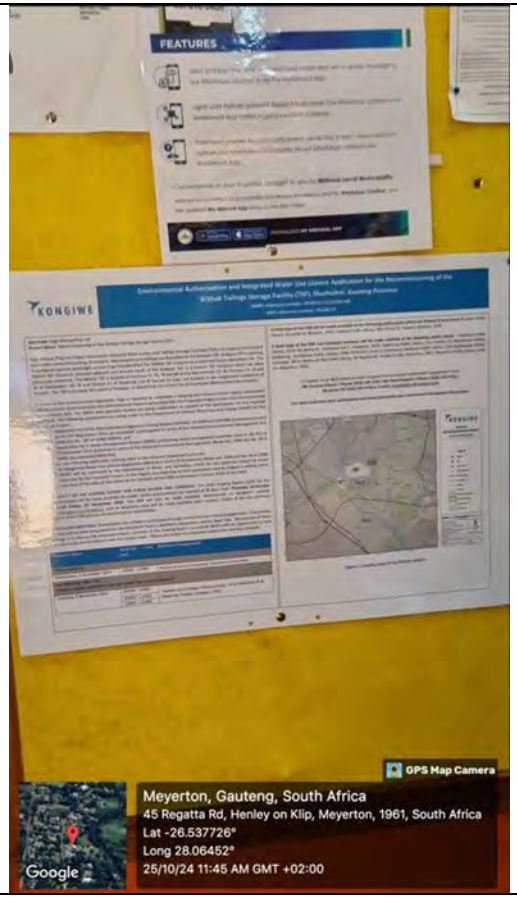
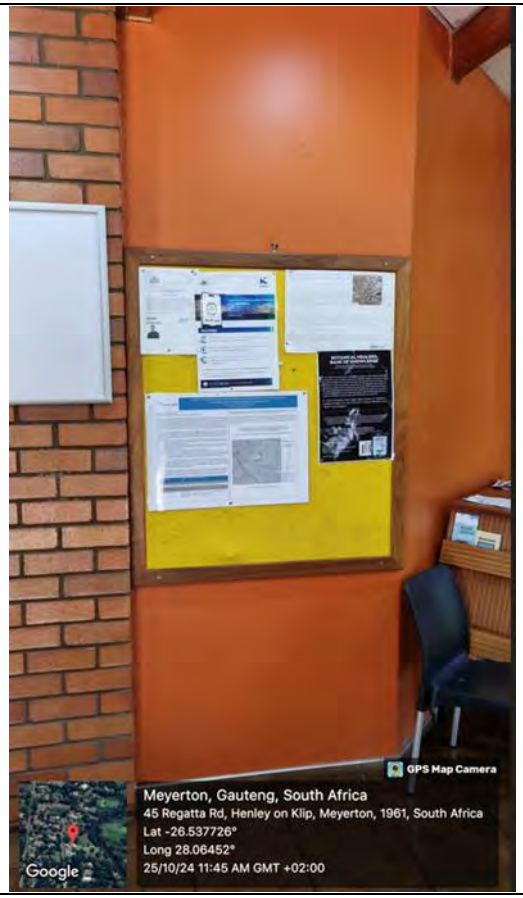
© 2024 Kongiwe Environmental (Pty) Ltd

22.	Randvaal Library	26.49969^{0}S 28.066569^{0}E			

© 2024 Kongiwe Environmental (Pty) Ltd

23.	Ixoxo backpackers	26.505035°S 28.07122°E				

© 2024 Kongiwe Environmental (Pty) Ltd

24.	Henley on Klip Library	26.537726^{0}S 28.06452^{0}E			

© 2024 Kongiwe Environmental (Pty) Ltd

25.	Church	26.55142^{0}S 28.063561^{0}E		

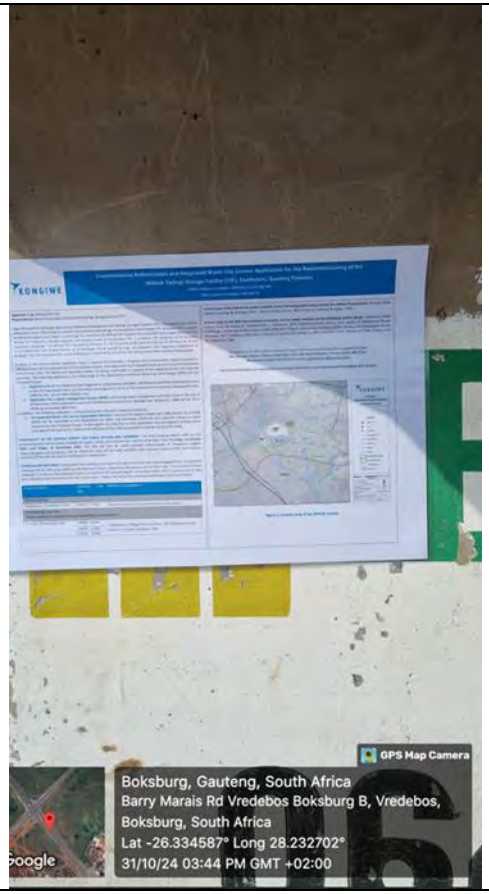
© 2024 Kongiwe Environmental (Pty) Ltd

26.	Riverview Stables Henley on Klip	26.555101^{0}S 28.060593^{0}E		

© 2024 Kongiwe Environmental (Pty) Ltd

27.	Duck St	26.323203^{0}S 28.244316^{0}E				

© 2024 Kongiwe Environmental (Pty) Ltd

28.	Barry Marais Road	26.334587^{0}S 28.232702^{0}E			

© 2024 Kongiwe Environmental (Pty) Ltd

29	Vosloos Chicken	26.368688^{0}S 28.243902^{0}E		

© 2024 Kongiwe Environmental (Pty) Ltd

30.	Kliprivier Enrichment Community	26.433073^{0}S 28.089444^{0}E			

© 2024 Kongiwe Environmental (Pty) Ltd

31	The purple horse	26.42302^{0}S 28.097874^{0}E				

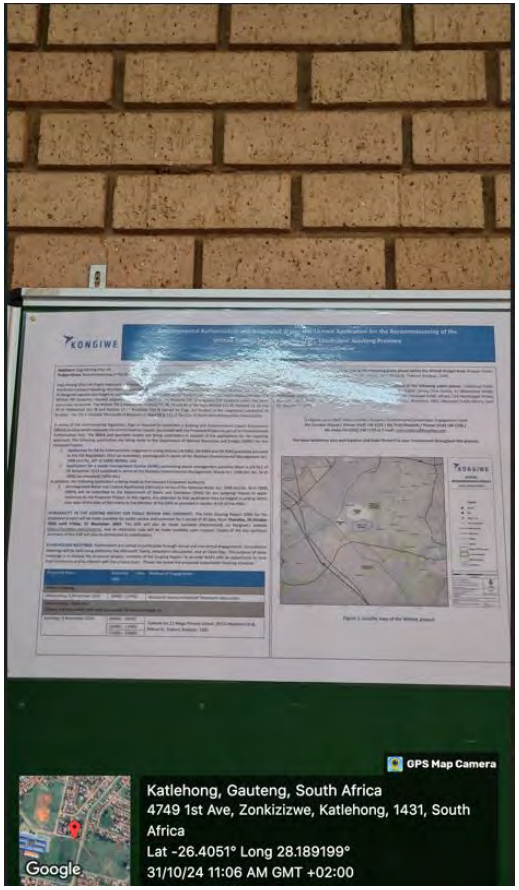
© 2024 Kongiwe Environmental (Pty) Ltd

32.	Outside Germiston Sewerage SS	26.42596^{0}S 28.103672^{0}E			

© 2024 Kongiwe Environmental (Pty) Ltd

33.	Synag Dairy 1	26.428876^{0}S 28.267995^{0}E		

© 2024 Kongiwe Environmental (Pty) Ltd

34	Zonkizizwe Public Library	26.405047^{0}S 28.18932^{0}E		

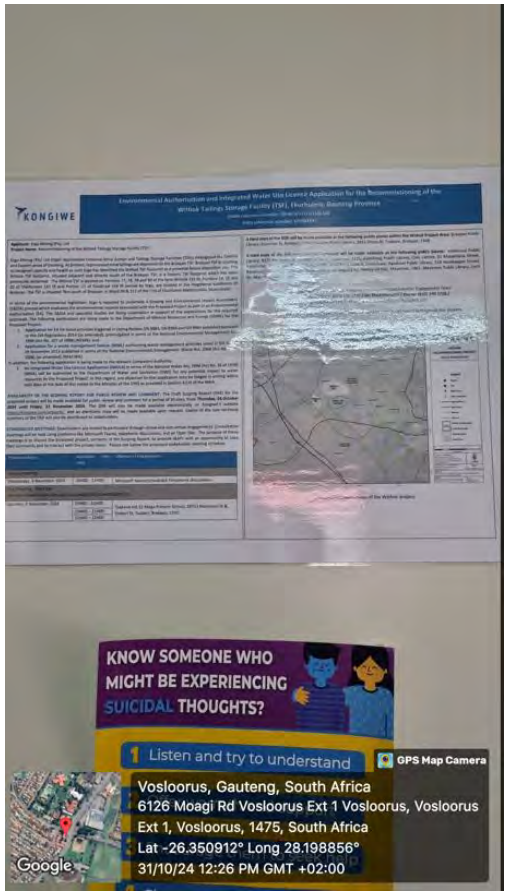
© 2024 Kongiwe Environmental (Pty) Ltd

35	Ubunjah St	26.391021^{0}S 28.19372^{0}E		

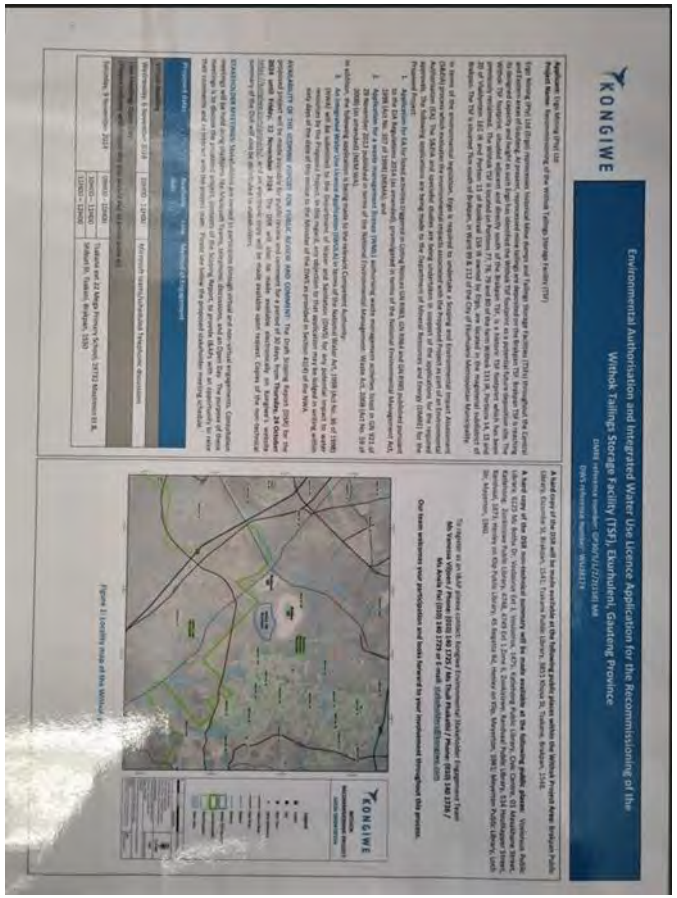
© 2024 Kongiwe Environmental (Pty) Ltd

36.	eNkandla Picnic and Functions Venue	26.388417^{0}S 28.189078^{0}E				

© 2024 Kongiwe Environmental (Pty) Ltd

37	Vosloorus Public Library	26.350912^{0}S 28.198856^{0}E		

© 2024 Kongiwe Environmental (Pty) Ltd

38.	Katlehong Public Library	26.313371^{0}S 28.155999^{0}E		



28°5'0"E
28°16'0"E
26°20'0"S
26°30'0"S
Benoni
Germiston
Boksburg
Brakpan
Ekurhuleni
Alberton
Ekurhuleni Metropolitan Municipality
N17
A
B
C
D
Withok
Heidelberg
N3
R23
Sedibeng
Midvaal Local Municipality
Lesedi Local Municipality
Emfuleni Local Municipality
Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

WITHOK RECOMMISIONING PROJECT

SITE NOTICES

Legend

- City
- Major Town
- Main Road
- National Road
- District Municipalities
- Local Municipality
- Parent Farm
- Withok Project Boundary

0 1 2 4 6 8 10 12 14
Kilometres

Project Code: DRDG#012
Client: Ergo Mining (Pty) Ltd
Drawn: C Strooh | Checked: Z Omar
© 2024 Kongiwe Environmental (Pty) Ltd
www.kongiwe.com | Date: 11 November 2024

1:180 000

Coordinate System: GCS WGS 1984
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.

FILE REF:
Z:\GIS\Projects\DRDGOLD\012 Withok\Projects\General \Map Set 1\Withok Site Notices Landscape A3

28°19'40"E

28°23'20"E

26°18'40"S

26°21'20"S

WITPOORTJE 117 IR

ROOIKRAAL 156 IR

WITHOK 131 IR

VLAKFONTEIN 130 IR

GLEN ROY 132 IR

Geluksdal

Tsakane

TSAKANE 217 IR

ROOIKRAAL 156 IR

Withok

VLAKFONTEIN 161 IR

RIETVALEI 172 IR

1

2

3

4

5

6

7

8

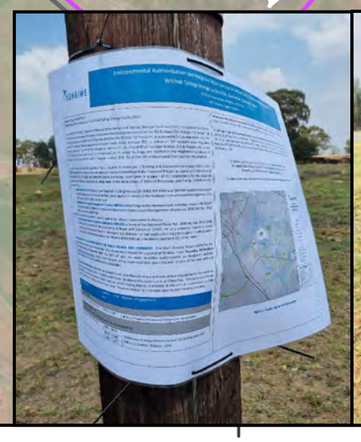
9

















WITHOK RECOMMISIONING PROJECT

SITE NOTICES A

Legend

- Other Settlement
- Parent Farm
- Withok Project Boundary

0 0,5 1 2 3

Kilometres

Project Code: DRDG#012
Client: Ergo Mining (Pty) Ltd
Drawn: C Strooh | Checked: Z Omar
© 2024 Kongiwe Environmental (Pty) Ltd
www.kongiwe.com | Date: 11 November 2024

1:40 000

Coordinate System: GCS WGS 1984
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.

FILE REF:
Z:\GIS\Projects\DRDGOLD\012 Withok\Projects\General \Map Set 1\Withok Site Notices A Landscape A3

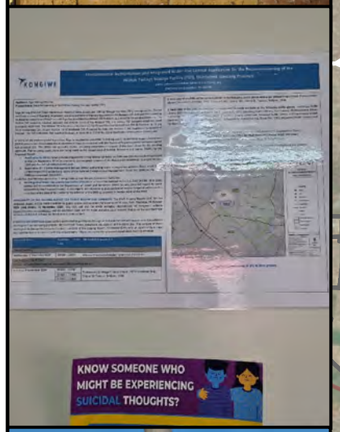
28°10'0"E

28°15'0"E

26°20'0"S

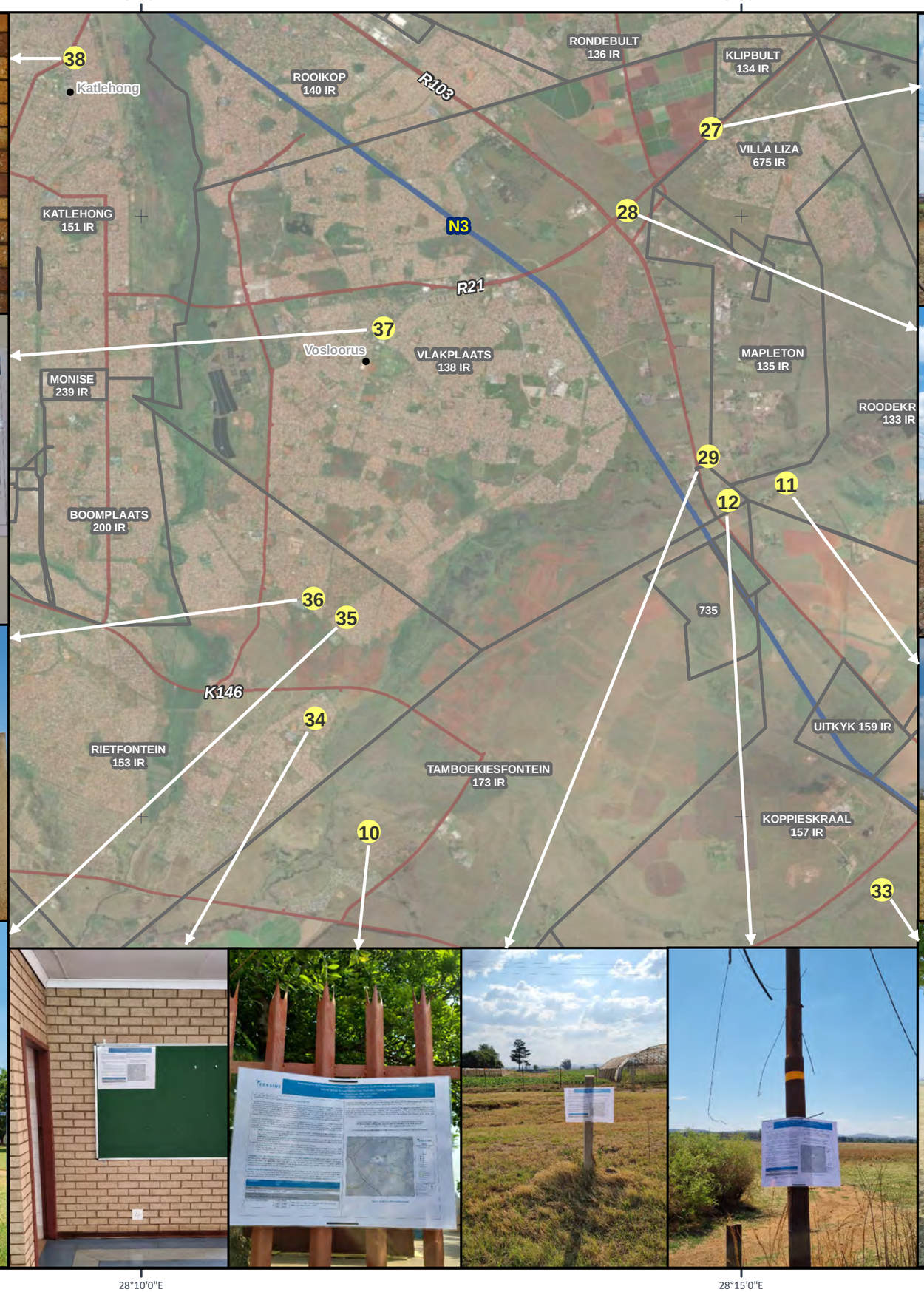
26°25'0"S



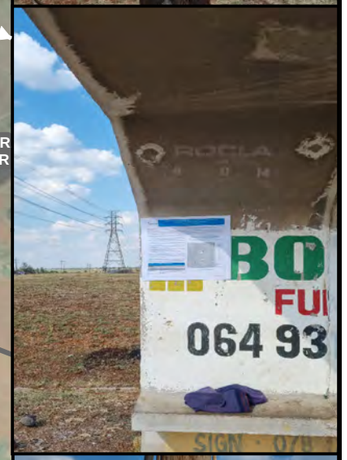
















KONGIWE

WITHOK RECOMMISIONING PROJECT

SITE NOTICES B

Legend

- Other Settlement
- Main Road
- National Road
- Parent Farm
- Withok Project Boundary

0 0,5 1 2 3 4 5

Kilometres

Project Code: DRDG#012
Client: Ergo Mining (Pty) Ltd
Drawn: C Strooh | Checked: Z Omar
© 2024 Kongiwe Environmental (Pty) Ltd
www.kongiwe.com | Date: 15 November 2024

1:70 000

(A3)

Coordinate System: GCS WGS 1984
Datum: WGS 1984

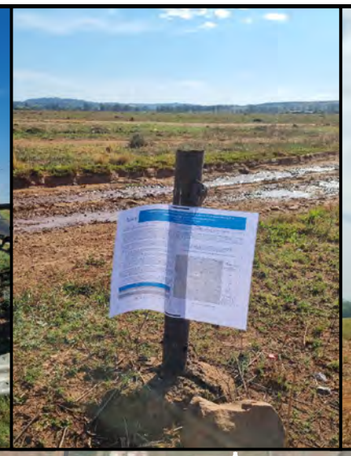
2024 Satellite Imagery

Disclaimer
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 1\Withok Site Notices B Landscape A3







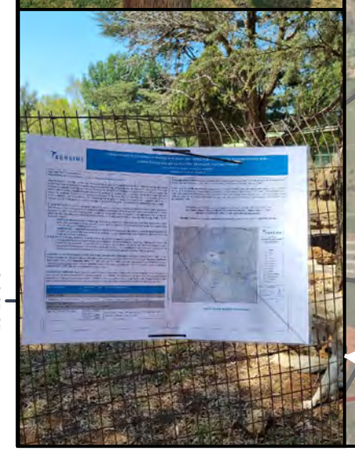


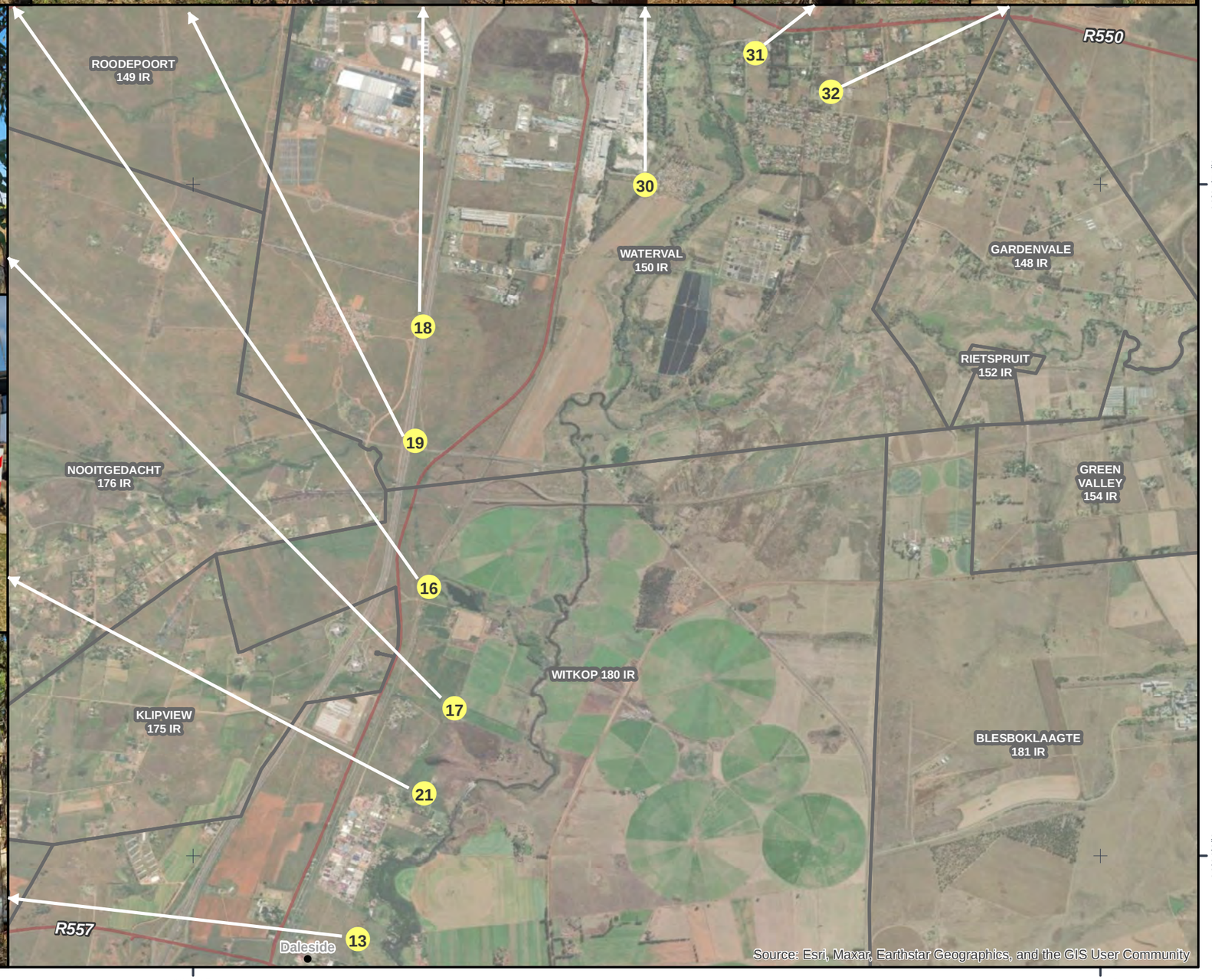












28°3'20"E
28°7'30"E
26°25'5"S
26°29'0"S

KONGIWE

WITHOK RECOMMISIONING PROJECT

SITE NOTICES C

Legend

- Other Settlement
- Main Road
- National Road
- Parent Farm
- Withok Project Boundary

0 0,5 1 2 3

Kilometres

Project Code: DRDG#012
Client: Ergo Mining (Pty) Ltd
Drawn: C Strooh | Checked: Z Omar
© 2024 Kongiwe Environmental (Pty) Ltd
www.kongiwe.com | Date: 11 November 2024

1:40 000

Coordinate System: GCS WGS 1984
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.

FILE REF:
Z:\GIS\Projects\DRDGOLD\012 Withok\Projects\General \Map Set 1\Withok Site Notices C Landscape A3



WITHOK RECOMMISIONING PROJECT

SITE NOTICES D

Legend

- Main Road
- Parent Farm
- Withok Project Boundary

0 0,5 1 2 3

Kilometres

Project Code: DRDG#012
Client: Ergo Mining (Pty) Ltd
Drawn: C Strooh | Checked: Z Omar
© 2024 Kongiwe Environmental (Pty) Ltd
www.kongiwe.com | Date: 11 November 2024

1:40 000

Coordinate System: GCS WGS 1984
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.

FILE REF:
Z:\GIS\Projects\DRDGOLD\012 Withok\Projects\General \Map Set 1\Withok Site Notices D Landscape A3

© 2025 Kongiwe Environmental (Pty) Ltd

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

Tracking:

Recipient	Read
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	stakeholders@kongiwe.com
Ms Thuli Phakathi	+27 (10) 140 1726	stakeholders@kongiwe.com
Ms Anela Fixi	+27 (10) 140 1729	stakeholders@kongiwe.com

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
150 Bryanston Drive, Bryanston, Sandton, 2191, South Africa.
PostNet Suite no 163, Private Bag X21, Bryanston, 2021, South Africa.
www.kongiwe.com

Disclaimer: The provisions of Section 11 of the Electronic Communications and Transactions Act 25 of 2002 apply to this email notice and make it enforceable and binding on the recipient/addressee. This email message (including attachments) contains information which may be confidential and/or legally privileged. Unless you are the intended recipient, you may not use, copy or disclose to anyone the message or any information contained in the message or from any attachments that were sent with this email, and If you have received this email message in error, please advise the sender by email, and delete the message. Unauthorised disclosure and/or use of information contained in this email may result in civil and criminal liability. Everything in this e-mail and attachments relating to the official business of Kongiwe Environmental (Pty) Ltd is proprietary to the company. Caution should be observed in placing any reliance upon any information contained in this e-mail, which is not intended to be a representation or inducement to make any decision in relation to Kongiwe Environmental (Pty) Ltd. Any decision taken based on the information provided in this e-mail, should only be made after consultation with appropriate legal, regulatory, tax, technical, business, investment, financial, and accounting advisors. The e-mail address of the sender may not be used, copied, sold, disclosed or incorporated into any database or mailing list for spamming and/or other marketing purposes without the prior consent of Kongiwe Environmental (Pty) Ltd. Unless the intention to contract has been expressed in this message, this message cannot be regarded as a solicitation to contract, nor be seen as an offer or acceptance of contractual agreement. Neither the sender of the e-mail, nor Kongiwe Environmental (Pty) Ltd shall be liable to any party for any direct, indirect or consequential damages, including, without limitation, loss of profit, interruption of business or loss of information, data or software or otherwise. No warranties are created or implied that an employee of Kongiwe Environmental (Pty) Ltd and/or a contractor of Kongiwe Environmental (Pty) Ltd is authorised to create and send this e-mail.

Kongiwe Stakeholder Engagement

From: Kongiwe Stakeholder Engagement
Sent: Tuesday, 05 November 2024 09:34
To: Bradly Thornton; Gerlinde Wilreker; Thuli Phakathi; Anela Fixi
Subject: REMINDER: 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

Tracking:

Recipient	Read
Bradly Thornton	
Gerlinde Wilreker	Read: 2024/11/05 09:38
Thuli Phakathi	Read: 2024/11/05 09:40
Anela Fixi	

Dear Stakeholder

This email serves as a reminder of the public participation process for the recommissioning of the Withok 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 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	stakeholders@kongiwe.com
Ms Thuli Phakathi	+27 (10) 140 1726	stakeholders@kongiwe.com
Ms Anela Fixi	+27 (10) 140 1729	stakeholders@kongiwe.com

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
150 Bryanston Drive, Bryanston, Sandton, 2191, South Africa.
PostNet Suite no 163, Private Bag X21, Bryanston, 2021, South Africa.
www.kongiwe.com

Disclaimer: The provisions of Section 11 of the Electronic Communications and Transactions Act 25 of 2002 apply to this email notice and make it enforceable and binding on the recipient/addressee. This email message (including attachments) contains information which may be confidential and/or legally privileged. Unless you are the intended recipient, you may not use, copy or disclose to anyone the message or any information contained in the message or from any attachments that were sent with this email, and If you have received this email message in error, please advise the sender by email, and delete the message. Unauthorised disclosure and/or use of information contained in this email may result in civil and criminal liability. Everything in this e-mail and attachments relating to the official business of Kongiwe Environmental (Pty) Ltd is proprietary to the company. Caution should be observed in placing any reliance upon any information contained in this e-mail, which is not intended to be a representation or inducement to make any decision in relation to Kongiwe Environmental (Pty) Ltd. Any decision taken based on the information provided in this e-mail, should only be made after consultation with appropriate legal, regulatory, tax, technical, business, investment, financial, and accounting advisors. The e-mail address of the sender may not be used, copied, sold, disclosed or incorporated into any database or mailing list for spamming and/or other marketing purposes without the prior consent of Kongiwe Environmental (Pty) Ltd. Unless the intention to contract has been expressed in this message, this message cannot be regarded as a solicitation to contract, nor be seen as an offer or acceptance of contractual agreement. Neither the sender of the e-mail, nor Kongiwe Environmental (Pty) Ltd shall be liable to any party for any direct, indirect or consequential damages, including, without limitation, loss of profit, interruption of business or loss of information, data or software or otherwise. No warranties are created or implied that an employee of Kongiwe Environmental (Pty) Ltd and/or a contractor of Kongiwe Environmental (Pty) Ltd is authorised to create and send this e-mail.

Kongiwe Stakeholder Engagement

From: Kongiwe Stakeholder Engagement
Sent: Tuesday, 03 December 2024 13:10
To: Gerlinde Wilreker; Thuli Phakathi; Anela Fixi; Bradly Thornton
Subject: Availability of the Final Scoping Report: Recommissioning of the Withok Tailings Storage Facility
Attachments: 3Dec24_FSR_Notif_Let.pdf

Follow Up Flag: Follow up
Flag Status: Completed

Tracking:

Recipient	Read
Gerlinde Wilreker	Read: 2024/12/03 13:12
Thuli Phakathi	Read: 2024/12/03 13:37
Anela Fixi	
Bradly Thornton	

Dear Stakeholder

Kongiwe Environmental (Pty) Ltd (Kongiwe Environmental) hereby gives notice to stakeholders of the availability of the Final Scoping Report (FSR) for the Recommissioning of the Withok Tailings Storage Facility, Ekurhuleni (TSF),
Gauteng Province.

Please see attached notification letter for details.

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

Kind Regards,

Stakeholder Engagement Team | Kongiwe Environmental (Pty) Ltd.
Tel: +27 (10) 140 6508 | Fax: +27 (86) 476 6438 | Email: 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

Disclaimer: The provisions of Section 11 of the Electronic Communications and Transactions Act 25 of 2002 apply to this email notice and make it enforceable and binding on the recipient/addressee. This email message (including attachments) contains information which may be confidential and/or legally privileged. Unless you are the intended recipient, you may not use, copy or disclose to anyone the message or any information contained in the message or from any attachments that were sent with this email, and if you have received this email message in error, please advise the sender by email, and delete the message. Unauthorised disclosure and/or use of information contained in this email may result in civil and criminal liability. Everything in this e-mail and attachments relating to the official business of Kongiwe Environmental (Pty) Ltd is proprietary to the company. Caution should be observed in placing any reliance upon any information contained in this e-mail, which is not intended to be a representation or inducement to make any decision in relation to Kongiwe Environmental (Pty) Ltd. Any decision taken based on the information provided in this e-mail, should only be made after consultation with appropriate legal, regulatory, tax, technical, business, investment, financial, and accounting advisors. The e-mail address of the sender may not be used, copied, sold, disclosed or incorporated into any database or mailing list for spamming and/or other marketing purposes without the prior consent of Kongiwe Environmental (Pty) Ltd. Unless the intention to contract has been expressed in this message, this message cannot be regarded as a solicitation to contract, nor be seen as an offer or acceptance of contractual agreement. Neither the sender of the e-mail, nor Kongiwe Environmental (Pty) Ltd shall be liable to any party for any direct, indirect or consequential damages, including, without limitation, loss of profit, interruption of business or loss of information, data or software or otherwise. No warranties are created or implied that an employee of Kongiwe Environmental (Pty) Ltd and/or a contractor of Kongiwe Environmental (Pty) Ltd is authorised to create and send this e-mail.

© 2025 Kongiwe Environmental (Pty) Ltd

Appendix C7: Authority Correspondence

mineral resources
& energy
Department:
Minerals Resources and Energy
REPUBLIC OF SOUTH AFRICA

Private Bag X 5, Braamfontein, 2017 222 Smit Street, Braamfontein, 2017.
Tel: 011 358 9700 Email: Nicholas.Chavalala@dmre.gov.za Ref No: GP 30/5/1/2/2 (158) MR

From: Mineral and Petroleum Regulation: Gauteng Office **Enquiries: Mr. Nicholas Chavalala**

By Registered Mail

Ergo Mining (Pty) Ltd

P. O. Box 12442

Selcourt

SPRINGS

1567

Attention: Mr. Masala Tshamano

ACKNOWLEDGEMENT OF AN APPLICATION FOR AN INTEGRATED ENVIRONMENTAL AUTHORISATION FOR THE PROPOSED RECOMMISSIONING OF THE WITHOK TAILINGS STORAGE FACILITY LISTED IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT: EIA REGULATIONS (983) 2014 AND THE NATIONAL ENVIRONMENTAL MANAGEMENT WASTE ACT, 2008 (ACT 58 OF 2008) IN RESPECT OF THE FARM WITHOK 131 IR, SITUATED IN THE MAGISTERIAL DISTRICT OF BRAKPAN.

1. The above-mentioned application lodged with the Department on **18 October 2024** refers.

2. The Department hereby acknowledges receipt of your application for an **Integrated Environmental Authorisation** in respect of the above-mentioned project.

3. Only activities listed on the application will be considered when issuing an integrated environmental authorisation and the onus is on the applicant to ensure that **all activities** related to the proposed project are included on the application form.

4. Kindly note that no listed activity may commence without an Environmental Authorisation.

This Department reserves the right to revise its initial comments and request further information from you based on any new or revised information received.

Yours faithfully

.....

Regional Manager: Mineral and Petroleum Regulation

Gauteng Region

Date: 24/10/2024

© 2025 Kongiwe Environmental (Pty) Ltd

Appendix C8: Meeting Minutes

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

Stakeholder Meeting Schedule – Draft EIR/EMPr Phase

Date of the meeting	Time	Meeting type / Format	Organisation / Address	Invited / Attended / Apologies	Resources Used	Who Presented (EAP / Ergo)	Project Team Attendance (Ergo and Kongiwe)
Thursday, 5 September 2024	**10H00**	**Pre-Application** **In-Person**	**Competent Authority:** Department of Mineral Resources and Energy (DMRE) Physical address: **222 Smit St, Braamfontein, Johannesburg**	**Invited:** ❖ Mr Musa Mangobe, Assistant Director ❖ Mr Nicholas Chavalala, Regional Manager: Environmental Management **Attended:** ❖ Mr Nicholas Chavalala, Regional Manager: Environmental Management **Apologies:** ❖ Mr Musa Mangobe, Assistant Director	❖ Presentation ❖ Attendance Register	Ms Gerlinde Wilreker, Kongiwe	Mr Greg Ovens, Project Manager, Ergo Mr Masala Tshamano, Environmental Manager, Ergo Ms Gerlinde Wilreker, Kongiwe Ms Thuli Phakathi, Kongiwe
Wednesday, 11 September 2024	**10H00**	**Pre-Application** **In-Person, and Site Visit**	**Competent Authority:** Department of Water and Sanitation (DWS)	**Invited:** ❖ Ms Thabelo Tshipate **Attended:** ❖ Ms Thabelo Tshipate, Environmental Officer, DWS ❖ Mr Rendani Ndou, Control Environmental Officer, DWS ❖ Ms Puseletso Teffo, Candidate Scientific Technician, DWS ❖ Mr Khathutshelo Mndau, Environmental Officer, DWS ❖ Mr Guillaume de Swardt, Engineer of record, Geo Tail ❖ Mr Simon Makama, Tailing Superintendent, DRD Gold Limited ❖ Mr Matimba Baloyi, Senior Superintendent, Fraser Alexander ❖ Mr Ofentse Phete, Tailings Site Manager, Fraser Alexander ❖ Mr Thabiso Mokoatle, Operations Matimba, Fraser Alexander **Apologies:** None	❖ Presentation ❖ Attendance Register	Ms Gerlinde Wilreker, Kongiwe Ms Phumla Mngwengwe, Kongiwe	Mr Greg Ovens, Project Manager, Ergo Mr Masala Tshamano, Environmental Manager, Ergo Mr Ofentse Phete, Tailings Manager, Ergo Ms Gerlinde Wilreker, Kongiwe Ms Anela Fixi, Kongiwe Ms Phumla Mngwengwe, Kongiwe Mr Ripfumelo Macevele, Kongiwe Mr Ripfumelo Macevele, Kongiwe

Tuesday, 5 November 2024	**09H00**	**<u>Forum</u>** **Online (Microsoft Teams)**	**Klip River Forum**	**Chaired by:** ❖ Mr Lesiba Mabona, Environmental Officer, DWS ❖ Mr Marc De Fontaine, Senior Water Quality Advisor, Rand Water	❖ Presentation ❖ Attendance Register	Ms Gerlinde Wilreker, Kongiwe	Mr Greg Ovens, Project Manager, Ergo Mr Masala Tshamano, Environmental Manager, Ergo Ms Gerlinde Wilreker, Kongiwe Ms Anela Fixi, Kongiwe Ms Thuli Phakathi, Kongiwe
Tuesday, 5 November 2024	**14H00**	**<u>Withok Project Area</u>** **Online (Microsoft Teams)**	**Local Municipalities** <u>City of Ekurhuleni Metropolitan Municipality</u> <u>(As an indirectly affected Landowner)</u>	**Invited:** ❖ Ms Lillian Kwakwa, Environmental Resource and Waste Management Department ❖ Mr Winston Marumo, Property Management Division, Real Estate Department ❖ Mr Flip Visser, Air Quality Section (Springs) ❖ Mr Dudu Twala, Area Manager: Brakpan CCA: City Planning ❖ Mr Bafana Mazibuko, Acting Head of Department: Disaster Management ❖ Mr Phillip Nice, Roads and Storm Water Department ❖ Mr Andile Daemane, Ward Councillor 99 ❖ Ms Nomalanga Mnguni, Ward Councillor 112 **Attended:** ❖ Ms Lillian Kwakwa, Environmental Resource and Waste Management Department ❖ Mr Winston Marumo, Property Management Division, Real Estate Department ❖ Mr Dudu Twala, Area Manager: Brakpan CCA: City Planning ❖ Ms Neo N. Mphahlele, Acting Regional Manager, Disaster Management and Emergency Services. ❖ Mr Papi Msimang (Germiston), Disaster Management ❖ Ms Cynthia Masang, Disaster Management	❖ Presentation ❖ Attendance Register	Ms Gerlinde Wilreker, Kongiwe	Mr Greg Ovens, Project Manager, Ergo Mr Masala Tshamano, Environmental Manager, Ergo Mr Josiah Tshisevhe, Community Liaison Manager, Ergo Mr Abiot Kekana, Transformation Manager Ms Gerlinde Wilreker, Kongiwe Ms Anela Fixi, Kongiwe Ms Thuli Phakathi, Kongiwe

				Apologies: ❖ Mr Andile Daemane, Ward Councillor 99 ❖ Ms Nomalanga Mnguni, Ward Councillor 112 ❖ Ms Maggy Hadebe, Spatial Planning ❖ Mr Martin Bekker, Spatial Planning ❖ Mr Gerard MacCarron, Spatial Planning			
Wednesday, 6 November 2024	**10H00**	**<u>Withok Project Area & ZOI</u>** **Online (Microsoft Teams)**	**<u>Online Meeting</u>** ❖ An opportunity for online meetings will be given to those stakeholders who do not want to / cannot attend the open days. <u>All sectors of society / Broader Public</u>	**Invited:** All sectors of society / Broader Public Ward Committee members and community leaders **Attended:** ❖ Ms Dineo Makuwa, Town Planning, Lesedi Local Municipality ❖ Mr Ipfi Mudzanani, Town Planning, Lesedi Local Municipality **Apologies:** None	❖ Presentation ❖ Attendance Register	Ms Gerlinde Wilreker, Kongiwe	Mr Greg Ovens, Project Manager, Ergo Mr Masala Tshamano, Environmental Manager, Ergo Mr Josiah Tshisevhe, Community Liaison Manager, Ergo Ms Leny Sawe, Strategic Communication, DRDG Ms Gerlinde Wilreker, Kongiwe Ms Anela Fixi, Kongiwe Ms Thuli Phakathi, Kongiwe
Wednesday 6, November 2024	**12H30**	**<u>Withok Project Area</u>** **Online (Microsoft Teams)**	**Ward Councillor Meetings** ***<u>Withok Project Area</u>*** <u>Relevant ward councillors – Wards affected 99</u> **<u>Ekurhuleni</u>**	**Invited:** ❖ Cllr Daemane Petrus Andile, Ward Councillor: (Ward 99) - Ekurhuleni **Attended:** ❖ Cllr Daemane Petrus Andile, Ward Councillor: (Ward 99) - Ekurhuleni **Apologies:** None	❖ Presentation ❖ Attendance Register ❖ Maps	Ms Gerlinde Wilreker, Kongiwe	Mr Josiah Tshisevhe, Community Liaison Manager, Ergo Ms Gerlinde Wilreker, Kongiwe Ms Anela Fixi, Kongiwe Ms Thuli Phakathi, Kongiwe Ms Vanessa Viljoen, Kongiwe
Thursday, 7 November 2024	**10H00**	**<u>Forum</u>** **Online (Microsoft Teams)**	**<u>Blesbokspruit Forum</u>** <u>Department of Water and Sanitation</u>	**Chaired by:** ❖ Mr Philimon Khwinana, Environmental Officer, DWS ❖ Mr Marc de Fontaine, Senior Water Quality Advisor, Rand Water	❖ Presentation ❖ Attendance Register	Ms Gerlinde Wilreker, Kongiwe	Mr Greg Ovens, Project Manager, Ergo Mr Masala Tshamano, Environmental Manager, Ergo Ms Gerlinde Wilreker, Kongiwe Ms Anela Fixi, Kongiwe
Thursday, 7 November 2024	**14H00**	**<u>Withok Project Area</u>** **Online (Microsoft Teams)**	**<u>Indirectly Affected Landowners</u>** <u>Department of Public Works and Infrastructure (DPWI)</u>	**Invited:** ❖ Ms Friedah Khoza, Property Manager ❖ Mr Zakhele Ndebele, Real Estate Management Service ❖ Mr Peter Matlhaga	❖ Presentation ❖ Attendance Register	Ms Gerlinde Wilreker, Kongiwe	Mr Greg Ovens, Project Manager, Ergo Mr Masala Tshamano, Environmental Manager, Ergo Ms Gerlinde Wilreker, Kongiwe Ms Anela Fixi, Kongiwe

				Attended: ❖ Mr Zakhele Ndebele, Real Estate Management Service **Apologies:** ❖ Ms Friedah Khoza, Property Manager ❖ Mr Peter Matlhaga			
Saturday, 9 November 2024	**09H00**	**<u>Withok Project Area & ZOI</u>** **<u>Open Day</u>** **In-Person**	**<u>Open Days (Consultation)</u>** ❖ All sectors of society / Broader Public Tsakane ext.22 Mega Primary School, 19732 Mashimin St &, Shiburi St, Tsakani, Brakpan, 1550	**Invited:** <u>All sectors of society / Broader Public</u> Ward Councillors, Committee members and community leaders **Attended:** Refer to the attendance register. **Apologies:** None	❖ Presentation ❖ Attendance Register ❖ Maps ❖ Posters	Ms Gerlinde Wilreker, Kongiwe	Mr Greg Ovens, Project Manager, Ergo Mr Masala Tshamano, Environmental Manager, Ergo Mr Josiah Tshisevhe, Community Liaison Manager, Ergo Mr Ofentse Phete, Tailings Manager, Ergo Ms Gerlinde Wilreker, Kongiwe Mr Bradly Thornton, Kongiwe Ms Vanessa Viljoen, Kongiwe Ms Thuli Phakathi, Kongiwe Ms Anela Fixi, Kongiwe Ms Phumla Mngwengwe, Kongiwe
Tuesday, 12 November 2024	**14H00**	**<u>Withok Project Area & ZOI</u>** **Online (Microsoft Teams)**	**Environmental NGOs** <u>Federation for Sustainable Environment (FSE)</u>	**Attended:** ❖ Ms Mariette Liefferink, CEO (FSE)	❖ Presentation ❖ Attendance Register	Ms Gerlinde Wilreker, Kongiwe	Mr Greg Ovens, Project Manager, Ergo Mr Masala Tshamano, Environmental Manager, Ergo Mr Mothusi Mafatshe, Environmental Coordinator, Ergo Ms Gerlinde Wilreker, Kongiwe Mr Bradly Thornton, Kongiwe Ms Vanessa Viljoen, Kongiwe Ms Anela Fixi, Kongiwe
Friday, 15 November 2024	**10H30**	**<u>Withok Project Area & ZOI</u>** **Online (Microsoft Teams)**	**Environmental NGOs** <u>KlipSA</u>	**Attended:** ❖ Dr Andrew Barker, Chairman ❖ Dr Dennis Jane, KlipSA Exco and KlipWaS convener ❖ Dr Kousar Banu Hoorzook, Programme Manager for UJ Process Energy Environment Technology Station	❖ Presentation ❖ Attendance Register	Ms Gerlinde Wilreker, Kongiwe	Mr Greg Ovens, Project Manager, Ergo Mr Masala Tshamano, Environmental Manager, Ergo Mr Mothusi Mafatshe, Environmental Coordinator, Ergo Ms Gerlinde Wilreker, Kongiwe Mr Bradly Thornton, Kongiwe Ms Vanessa Viljoen, Kongiwe Ms Anela Fixi, Kongiwe Mr Bradly Thornton, Kongiwe

Ergo Mining (Pty) Ltd

Withok TSF Recommissioning Project

Stakeholder Engagement Meeting

DMRE reference number: GP158MR

DWS reference number: WU38174

Agenda

1. Purpose of the Meeting
2. Important Notice
3. Introduction
4. Kongiwe's Role as an Independent Environmental Assessment Practitioner
5. Project Background
6. Project Location
7. History of the site
8. Current Status of the Site
9. Project Description: The Process
10. TSF Design
11. Technical Details
12. Project Infrastructure
13. Specialist Studies
14. Listed Activities & Water Uses
15. Legislative Framework
16. Document Availability
17. The Way Forward
18. Questions & Answers

©2024 Kongiwe Environmental

Purpose of the Meeting

- Discuss the proposed Withok TSF Recommissioning Project.
- Provide an overview of the Scoping and Environmental Impact Assessment process.
- Provide you with an opportunity to raise comments/seek clarity and provide input.
- Record comments raised and include in the Comments and Responses Report.

©2024 Kongiwe Environmental

Important Notice

- This meeting is a formal consultation in terms of the requirements as stipulated in the:
  - National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA) for an Application for an Environmental Authorisation (EA) for listed activities triggered in Listing Notices GN R983 and GN R984 in terms of the Environmental Impact Assessment (EIA) Regulations of December 2014, as amended. The Department of Mineral Resources and Energy (DMRE) will be the Competent Authority to assess the EA for the proposed project.
  - National Water Act, 1998 (Act No.36 of 1998) (NWA) for an Integrated Water Use Licence Application (IWULA) in accordance with the Act. The Department of Water and Sanitation (DWS) will be the Competent Authority to assess the IWULA for the proposed project.

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.

©2024 Kongiwe Environmental

Introduction

- **Kongiwe**
  - Gerlinde Wilreker – Project Manager & EAP
  - Vanessa Viljoen – Stakeholder Engagement
  - Thuli Phakathi – Stakeholder Engagement
  - Anela Fixi – Stakeholder Engagement

- **Ergo Mining**
  - Greg Ovens
  - Masala Tshamano
  - Josiah Tshisevhe

©2024 Kongiwe Environmental

Kongiwe's Role

- As an independent Environmental Assessment Practitioner, it is our role to perform an objective assessment of what the positive and negative environmental impacts of the proposed project may be, to quantify these, describe possible mitigations, collect public comment and supply the DMRE with the documentation so that they can determine if the project should proceed or not.

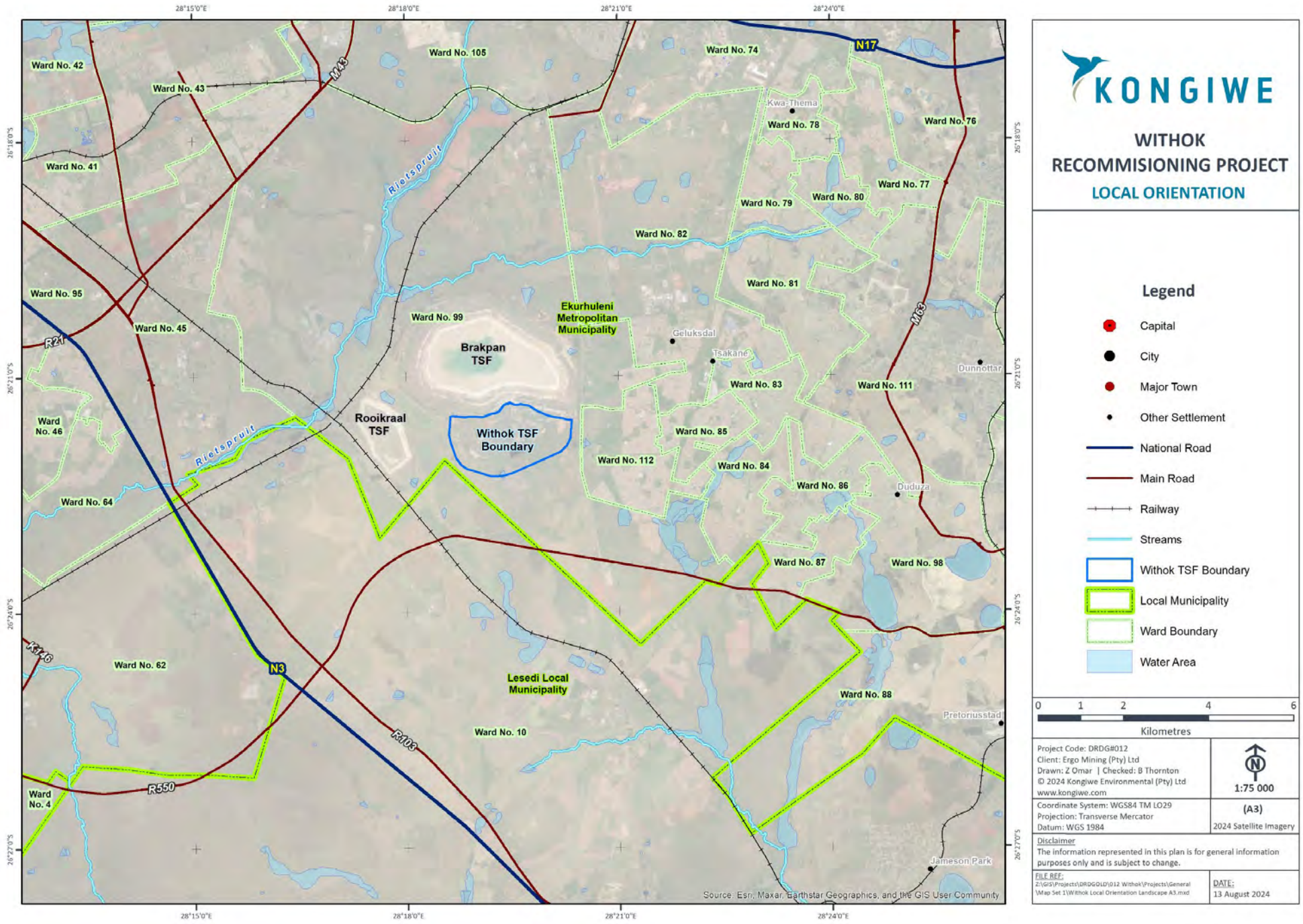
©2024 Kongiwe Environmental

Project Background

- **Applicant**: Ergo Mining (Pty) Ltd, a subsidiary of DRDGOLD Limited (DRD)
- **Activity**: The recommissioning of the Withok TSF (400 Ha)
- **Life of Operation:** 20 years
- Ergo is reprocessing historical 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 will in the future reach its designed capacity and height and as such Ergo has identified the Withok TSF footprint as a potential future deposition site.
- The Withok TSF, situated adjacent and directly south of the Brakpan TSF, is a historic TSF footprint which has previously been reclaimed.
- Withok TSF is essential for the continued LOM of Ergo Mining. The increased deposition capacity created by Withok will allow Ergo Mining the opportunity to continue the reprocessing of numerous large historic tailings located in Ekurhuleni.
- The reclamation projects are in line with the objectives of the Gauteng Mine Residue Area Strategy (2011), which are to reclaim and/or rehabilitate TSFs to the point where they become safe for adjacent communities and land can be made available for other purposes.

©2024 Kongiwe Environmental

Project Location



Project Motivation

- DRD is a world-leader in the retreatment of historic TSF. They reprocess historic mine dumps, extract remnant gold from them and reintegrate previously large areas of unusable sterilized land into economically viable land uses such as industrial, light industrial, domestic, and agricultural land uses.
- Positive Impacts:
  - Removes significant pollution point sources,
  - reduces illegal and criminal activities on these facilities
  - contributes to the fiscus and sustained employment of over three thousand people in the central and eastern areas of Gauteng.
  - The retreatment and tailings removal make lives easier for communities living next to these facilities.
- Aligns with the Gauteng Mine Residue Area Strategy (2012), Ekurhuleni Metropolitan Spatial Development Framework (2015) objectives to remove historic TSFs scattered throughout the Gauteng landscape.
- Ergo's primary deposition facility, Brakpan Tailings Storage Facility is reaching its design capacity within the next few years. Ergo is undertaking the licencing and permitting for the recommissioning of the Withok TSF which is a historic mine tailings dam located directly adjacent to the Brakpan 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, approximately 1 800 ha of sterilized mine land.
- 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.

History of the Site



1985



2004



2011

©2024 Kongiwe Environmental

Current Status of the Site








©2024 Kongiwe Environmental

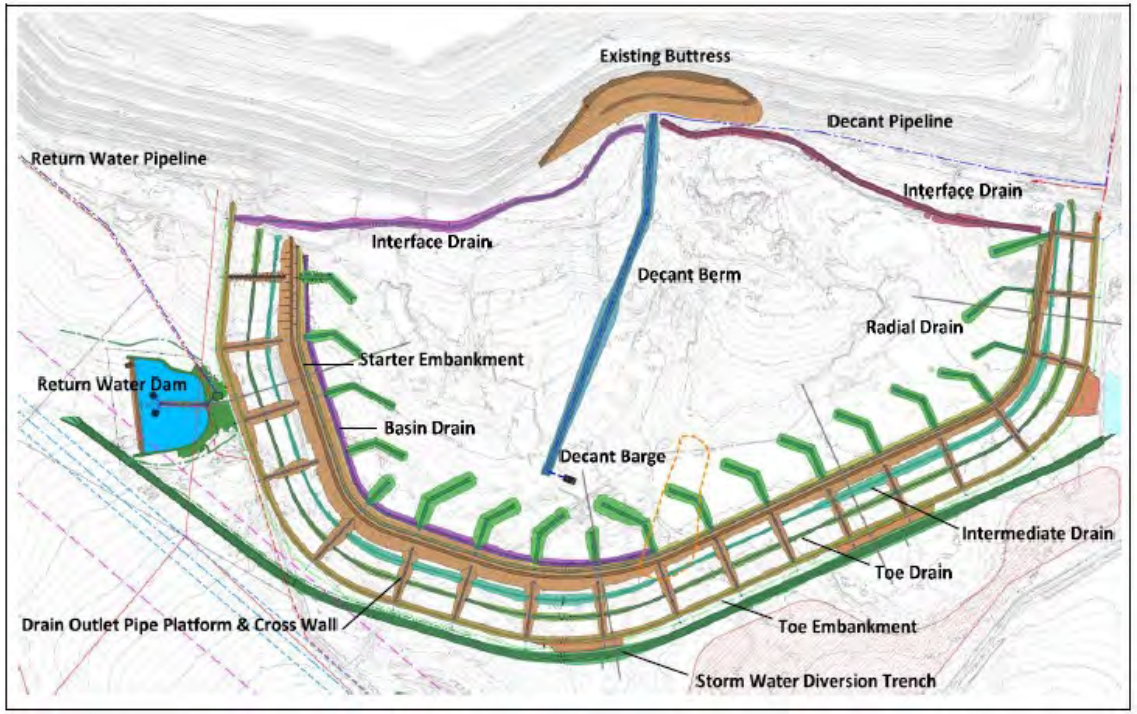
Project Description: The Process

- The recommissioned Withok TSF will buttress the southern flank of the Brakpan TSF. The footprint required for the recommissioned Withok TSF is approximately 400ha, which is less than the original design 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.

©2024 Kongiwe Environmental

Technical Details

- Upgrading of the current footprint to allow for the redevelopment of the Withok TSF.
  - 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.

© 2024 Kongiwe Environmental

TSF Design

- DRDGOLD has implemented a Tailings Management Policy and a Tailings Storage Facility Management Standard. DRDGOLD is committed to comply with this policy, as well as to align itself with the Global Industry Standard on Tailings Management (GISTM) where appropriate.
- 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).
- **SA Dam Safety Classification**:
  - The National Water Act (NWA) requires dams above a certain magnitude to be classified. The principles of the Classification system are like those of SANS 10286, only the criteria differing slightly. If a dam is higher than 5m and contains more than 50,000m3 of water, it must be registered with the Dam Safety Office (DSO) of the DWS, who then apply the Classification based upon specific data relating to the proposed facility submitted by the Applicant.
  - The Withok TSF will be classified as a Category III dam.
  - The Withok TSF must be designed by an Approved Professional Person (APP) leading an Approved Professional Team (APT). Application will be made to the DWS DSO and ECSA (Engineering Council of South Africa) for approval of the APP.
- APP Team
  - APP: Design & Quality Monitoring: Geo Tails SA (Guillaume De Swardt, MSc Eng (Civil), Pr Eng (no. 950429))
  - Hydrologist: iLanda (Dr B Randall)
  - Geo-hydrologists: Delta h (Dr K Witthueser) & Water Hunters (Dr Fanie Botha)
  - Engineering Geologists: BGC (Tony A'Bear)
  - Geotechnical Engineers: ARQ (Thomas O'Brien & Katy O'Brien)
  - Seismicity Definition: NHAC (Prof Andrzej Kijko)
  - Dam Break Analysis: ARQ (Michelle Blaeser)
  - Mechanical & Electrical Engineers: ERGO Engineering Team

©2024 Kongiwe Environmental

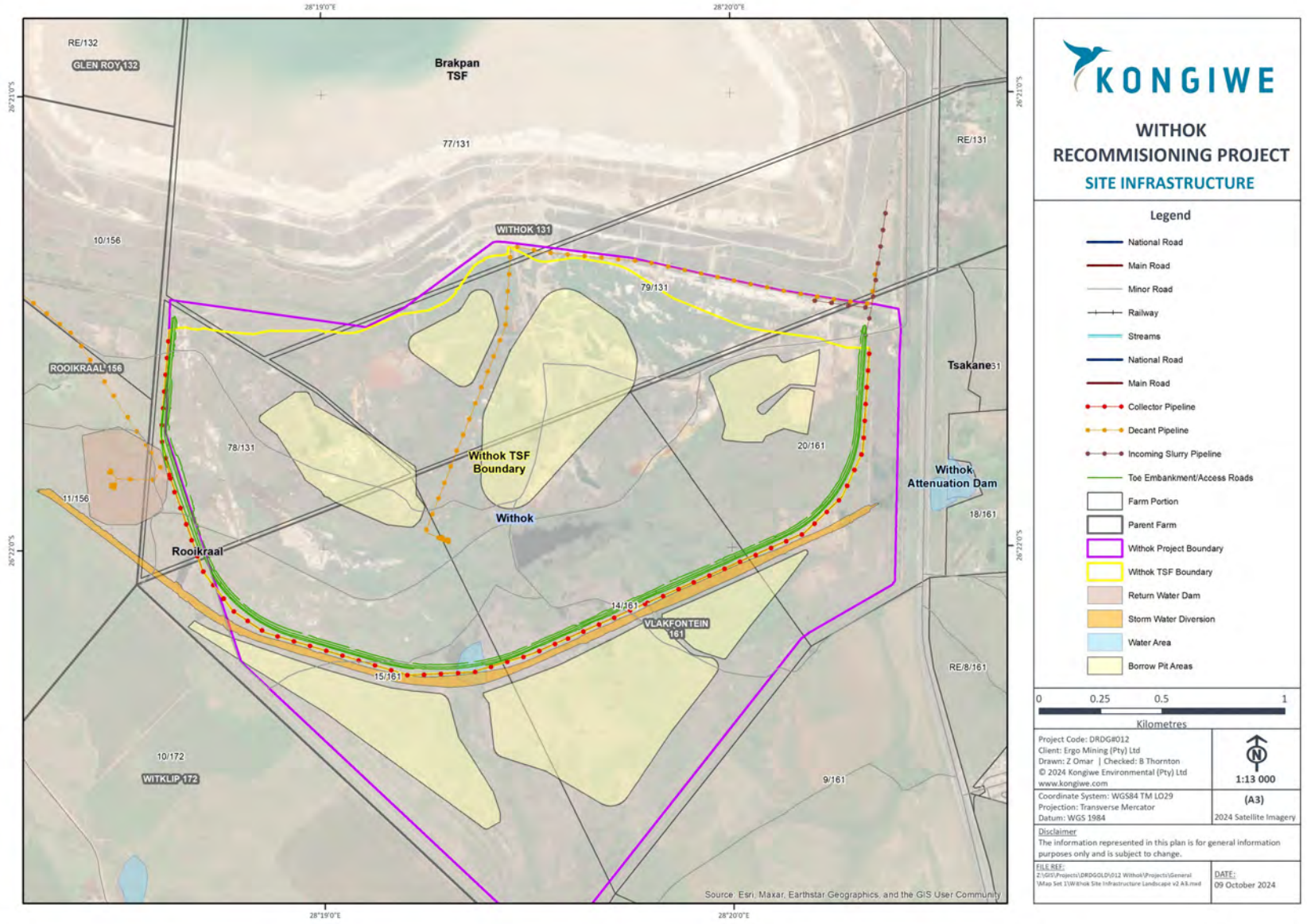
TSF Design

- DRDGOLD 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.
- **GISTM**: The GISTM requires (Requirement 4.1) that the consequence of failure classification for a TSF should be determined by assessing the downstream conditions documented in the knowledge base. The assessment and selection of the classification (GISTM Consequence Classification Matrix – Annex 2) shall be based on the dam breach assessment for the credible catastrophic failure modes.
- The freeboard targets are guided by legislation and best practice, and are the most stringent of:
  - 50-yr design storm plus 0.8 m dry freeboard (GN 704),
  - 100-yr design storm plus 0.8 m dry freeboard (SANS 10286)
  - 10 000-yr design storm (GISTM)
  - Pool >50m from the outer embankments following a 50-yr design storm (GN 632).
- Capacity Designed for
  - Deposition rate: The TSF can accommodate a deposition rate of 1.3 million dry tonnes per month.
  - Cyclone split: The underflow material required for freeboard construction and structural stability is approximately 20% by mass of the total deposition rate.
  - Vertical height & elevation: The final crest elevation will be 1,660.0mamsl. The maximum vertical height of the TSF at finality will be approximately 103m.
  - Storage capacity: The storage capacity that will be created is approximately 310 million dry tonnes. This relates to an airspace volume of approximately 223 million m^3 at an average dry density of approximately 1.39.
  - Rate of rise: The rate of rise in the basin, over the proposed operational life, will be between 3.5 and 4.6 m/annum, well within the rate achievable with the cyclone deposition method.
  - Design life: Based on an average deposition rate of 1.3 million tpm, the design life of the facility is approximately 20 years.

©2024 Kongiwe Environmental

Project Infrastructure

- The following infrastructure will be utilised on site:
  - Access roads
  - Withok TSF
  - Borrow pits
  - Slurry deposition pipelines
  - Return water pipelines
  - Return water dam
  - Catchment paddocks
  - Sump and stormwater diversion trench
  - Temporary construction camp which will include site office, vehicle service area, hydrocarbon storage, diesel storage, and septic tanks.



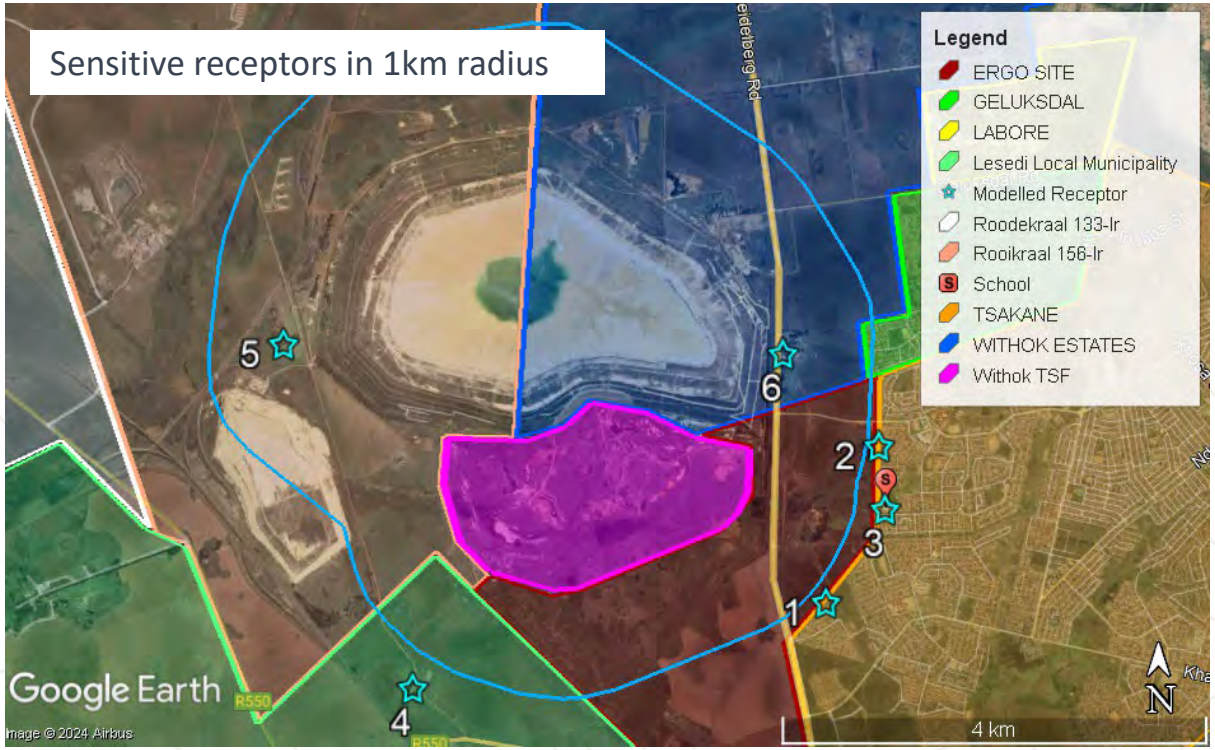
Specialist Studies

Proposed Specialist Studies	
Biodiversity Impact Assessment	Wetlands Impact Assessment
Surface Water Impact Assessment	Groundwater Impact Assessment
Air Quality Impact Assessment	Socio-Economic Impact Assessment
Heritage Impact assessment	Health Impact assessment
Noise Impact Assessment	Visual Impact Assessment

©2024 Kongiwe Environmental

Air Quality

- In 2003 the Gauteng Department of Agriculture, Conservation and Environment, now the Gauteng Department of Agricultural and Rural Development (GDARD), developed a set of buffer zones to demarcate safe distances for development around mine residue areas. The site is currently compliant with the GDARD buffers.
- Current emissions from the Brakpan TSF are expected to be causing elevated ambient concentrations of dust fallout in downwind areas on windy days.
- Residential areas to the east of the TSFs fall outside of the 1000 m buffer zone



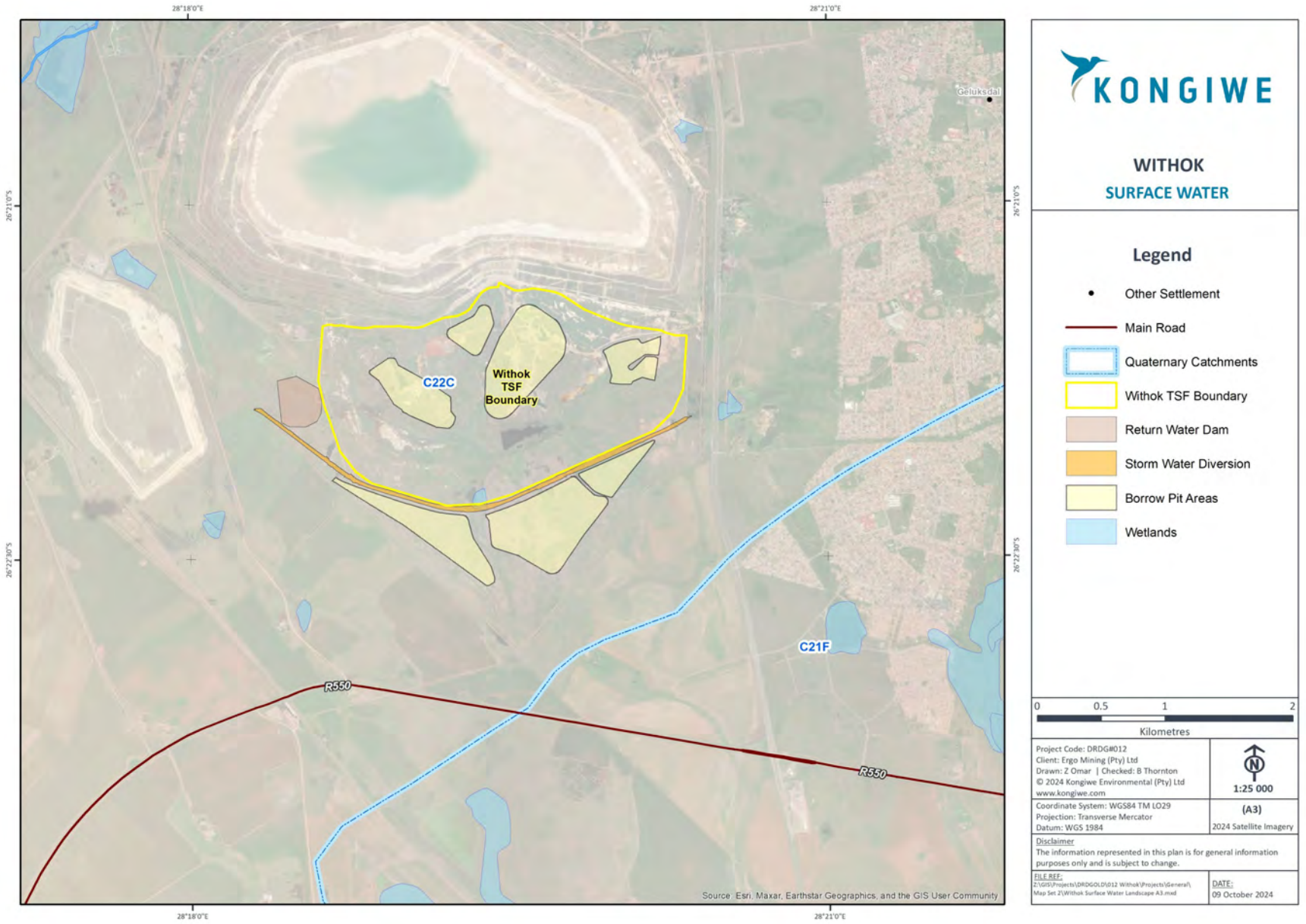
Groundwater

- The following hydro-stratigraphic units underlie the TSFs:
  - Topsoil/gravel (average thickness of 2 m), which acts as a shallow perched aquifer in areas where the impermeable dolerite sill is present
  - Shallow weathered aquifer (thickness between 3 m and 22 m)
  - Fractured and Karst aquifers within both the Karoo and Transvaal Supergroup rocks
- Groundwater levels ranging from surface to 21m bgl, with an average groundwater level of 4.8m bgl.
- The shallow groundwater levels are indicative of a perched or shallow aquifer system, with local mounding due to seepage from the TSF resulting in shallower water levels in its proximity.
- The area is indicative of an aquifer system where shallow groundwater conditions for the most part mimic surface topography, with groundwater flowing from higher lying ground towards lower lying ground and drainage systems (natural streams).
- It is anticipated that the lined recommissioned Withok TSF will result in negligible seepage contributions.

©2024 Kongiwe Environmental

Surface Water

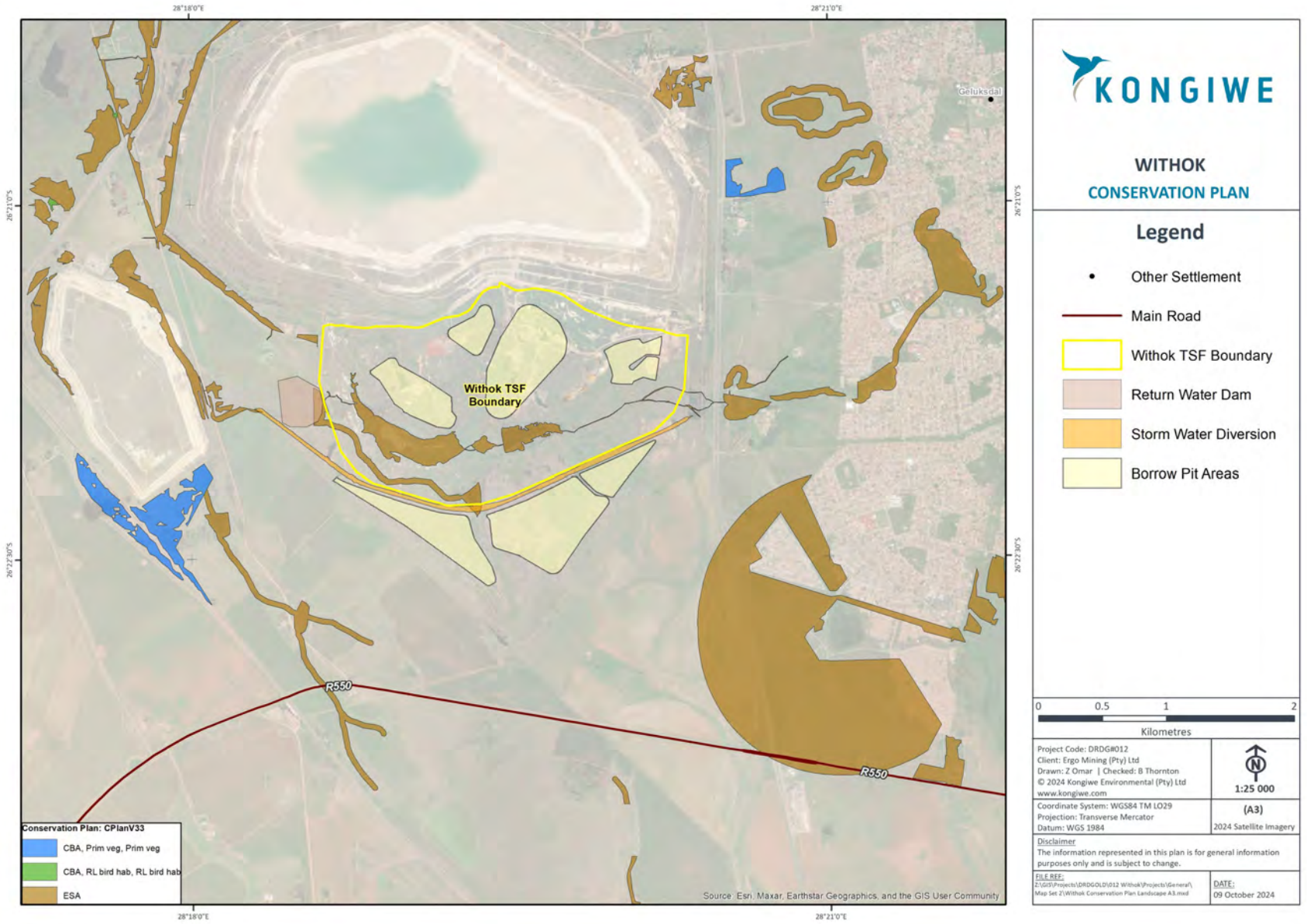
- The Withok TSF complex is in quaternary catchment C22C.
- The Rietspruit flows east to west past the northern flank of the Brakpan TSF. The Rietspruit is a tributary of the Kliprivier, which flows into the Vaal River, upstream of the Vaal Barrage but downstream of the Vaal Dam.
- Water from the attenuation dam, currently channeled under the TSF footprint will be diverted around the recommissioned TSF.
- Clean and dirty water separation systems will be implemented.



Biodiversity

Terrestrial Biodiversity

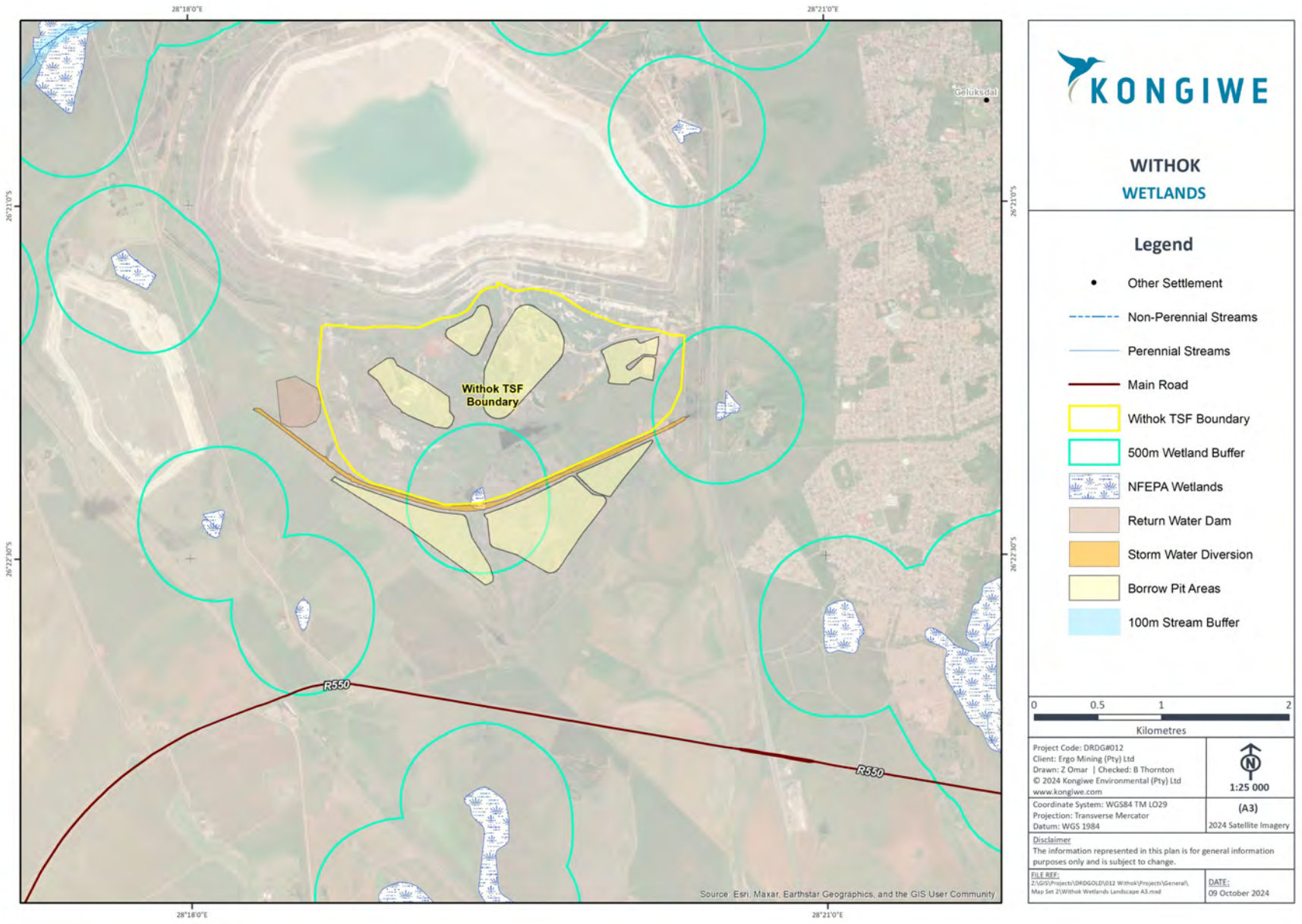
- The Project Area of Influence was categorised as possessing habitats with areas ranging from ‘Low’ to ‘Medium’ Site Ecological Importance.
- The location, state and size of the ecosystem suggests that it is unlikely that any functional habitat or SCCs will be lost as a result of the impacts arising from the proposed activities.



Biodiversity

Wetands

- No NFPEA wetlands are present on site.
- Several artificial features were observed which are attributed to the nature of the historical land use (a TSF) and owing to extensive reshaping of the topography during the sites rehabilitation stages after decommissioning of the old TSF.



Socio-Economic

Socio-Economic Baseline:

- Local land use around the project area is mainly smallholder agriculture and residential areas, high density residential areas to the east and further south west.
- The high population growth rates, the high ratios of economically active population and the relatively low female ratios in Ward 99 where the project is situated indicates to relatively high historic rates of population in-migration into the local area.
- The relatively lower population densities of Ward 99 (compared to CoE and Gauteng densities) suggest a larger rural portion in the ward compared to say the adjacent Ward 82 and especially Ward 112.
- Within the local wards surrounding the project, a relatively high percentage of households experienced housing backlogs and lacked access to improved sanitation and regular waste services. The lack of water borne sanitation facilities could also have negative implications for groundwater quality levels in the ward area.
- The project ward is specifically characterised by low skill levels with close to 59% of the labour force being classified as unskilled.
- The local areas around the project also experience a relative shortage of schools, educators as well as physical classroom space.
- The finance, services and manufacturing sectors play a major role in the CoE economy. The mining sector only contributed 2,2% to the CoE economy in 2018 after having declined for more than a decade.
- The continued high growth in the labour force coupled with low growth in output and employment resulted in increasing unemployment rates in CoE, especially among the youth.
- The unemployment rate in the local wards adjacent to the Project was significantly than the municipal and national unemployment rates, especially in Ward 99 where the project is situated.
- Corresponding to high unemployment rates, Ward 99 had the highest poverty rate followed by Ward 112 in the Tsakane area. The poverty rate in all these local wards were also well below the metro and national poverty rates.

Baseline Findings

- The Withok TSF would support various reclamation activities of DRDGOLD which in turn create direct and indirect employment opportunities in the larger region. DRDGOLD contributes towards the National GDP and implements social investment projects in tits project areas.

Noise

- Noises associated with the development and operation of the borrow pits, as well as the recommissioning of the Withok TSF will be limited to less than 200m from the project activities and insignificant further than 500m from such activities.
- No noise-sensitive receptors were identified within 500m from the project infrastructure associated with the proposed TSF reclamation project.
- Considering the project area to be developed, the likely elevated sound character of the area (due to traffic noises on the R32 road) as well as the distance between potential noise sources and identified NSR (more than 500 m from the proposed activities), the recommissioning activities associated with the Withok TSF will not influence ambient sound levels at any NSR residing in the vicinity of the project site.



Health

- The twelve environmental health and safety areas were scoped for relevance in impacts relating to the TSF expansion.
  - EHA 1: Vector-Related Diseases
  - EHA 2: Respiratory and Housing Issues
  - EHA 3: Veterinary Medicine and Zoonotic Issues
  - EHA 4: Sexually Transmitted Diseases
  - EHA 5: Soil, Water, Sanitation and Hygiene Related Diseases
  - EHA 6: Food- and Nutrition-related Issues
  - EHA 7: Accidents and Injuries
  - EHA 8: Exposure to Potentially Hazardous Materials
  - EHA 9: Social Determinants of Health
  - EHA 10: Cultural Health Practices
  - EHA 11: Health Services Infrastructure and Capacity
  - EHA 12: Noncommunicable Diseases
- Ten areas require further investigation, of which two entail possible positive impacts.
- Preliminary screening has identified potentially hazardous material, respiratory and housing issues and accidents/injuries to be the highest priority areas. Social determinants of health and health services/infrastructure EHS areas are where positive impacts may be generated from the operation.

©2024 Kongiwe Environmental

Listed Activities & Water Uses

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);

    - GN R983 – Activities 9, 10, 12, 13, 14, 19, 21D
    - GN R984 – Activities 6, 7
    - GN R985 – Activity 15

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).

    - Category B – 10

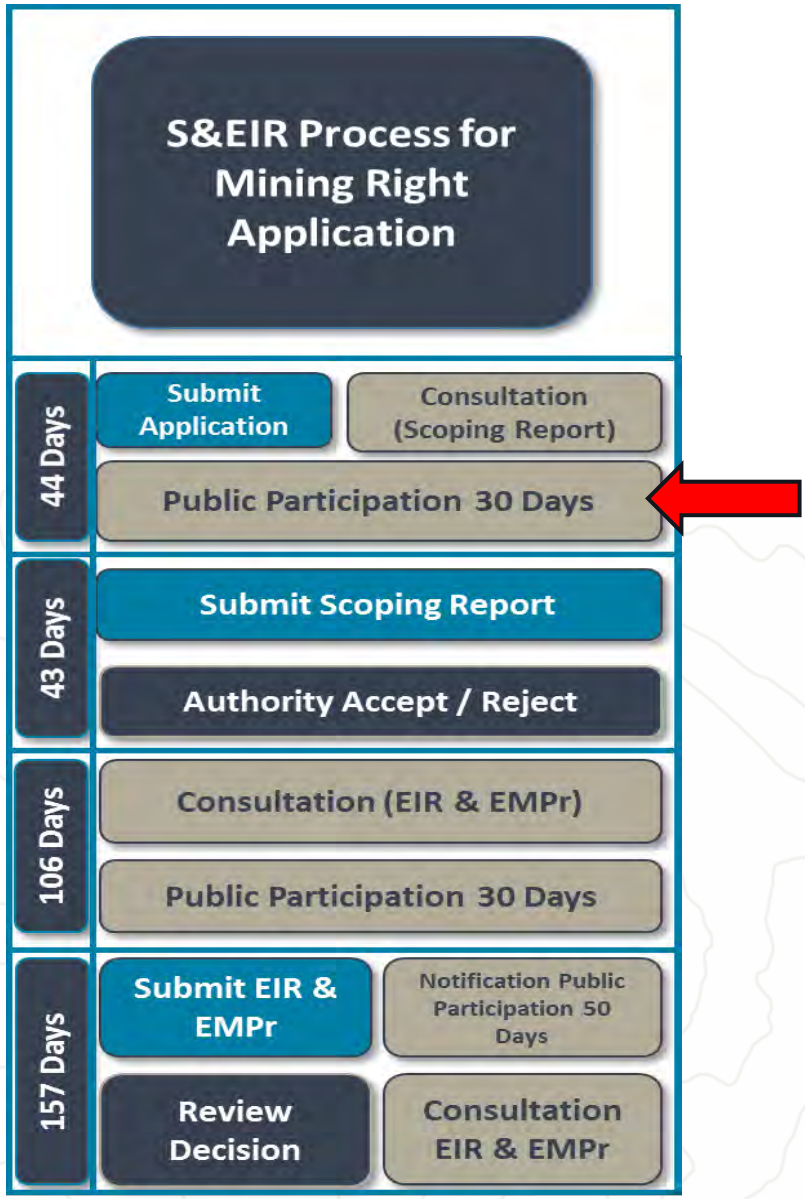
3. **An Integrated Water Use Licence Application (IWULA)** in terms of the National Water Act, 1998 (Act No. 36 of 1998) (NWA) will be submitted to the Department of Water and Sanitation (DWS) for any potential impact to water resources by the Proposed Project. In this regard, any objection to that application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

    - Water uses 21 a, (c and i), g

©2024 Kongiwe Environmental

Legislative Framework

- An integrated Environmental Authorisation (EA) application has been submitted to the DMRE as the Competent Authority for the proposed project.
- The applicable applications to be assessed by the DMRE are as follows:
  - Application for an Environmental Authorisation for listed activities triggered in Listing Notices GN R983 and GN R984 in terms of the Environmental Impact Assessment (EIA) Regulations, 2014, as amended, as promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA);
  - Application for a waste management licence (WML) authorising waste management activities in terms of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) (NEM:WA) and the Activities listed in GN R921 of 29 November 2013 published in terms of NEM:WA.
- In addition, the following applications will be made to the relevant Competent Authorities:
  - An Integrated Water Use Licence Application (IWULA) will be undertaken in accordance with the National Water Act, 1998 (Act No.36 of 1998) (NWA). The Department of Water and Sanitation will be the Competent Authority to assess the IWULA for the proposed project.



©2024 Kongiwe Environmental

Document Availability

Location	Physical Adress
Public Libraries with the Scoping Report	
Brakpan Public Library	Escombe St, Brakpan, 1541
Tsakane Public Library	3851 Xhosa St, Tsakane, Brakpan, 1548
Public Libraries with the non-technical summary	
Vosloruus 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	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, Mayerton, 1960
Online availability	
Kongiwe Environmental website	https://kongiwe.com/projects/
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: stakeholders@kongiwe.com should they require assistance with accessing the DSR/ have queries regarding the Proposed Project.	

The Way Forward

- Key Dates :
  - NEMA application submission: Friday, 18 October 2024
  - Project Announcement: Tuesday , 22 October 2024.
  - Public Participation Period: Thursday, 24 October – Friday, 22 November 2024
    - Online Meetings
    - **Open Day:** Saturday, 09 November 2024 at Tsakane ext.22 Mega Primary School, 19732 Mashimin St &, Shiburi St, Tsakani, Brakpan, 1550
  - Final Scoping Report Submission: Monday 02 December 2024
  - EIA Phase: 07 February 2025 to 30 May 2025
    - 30 day consultation for the EIA/EMPr
    - 60 day consultation for the IWULA

© 2024 Kongiwe Environmental

Comment & Discussion

- Discussion
- Closing



©2024 Kongiwe Environmental

Contact

- **Name: Vanessa Viljoen / Thuli Phakathi**
- **Tel: 010 140 1725/6**
- **Email: Stakeholders@kongiwe.com**

Kongiwe Environmental
150 Bryanston Drive, Bryanston, Sandton, 2191, South Africa.
PostNet Suite no 163, Private Bag X21, Bryanston, 2021, South Africa.

info@kongiwe.com
www.kongiwe.com

© 2024 Kongiwe Environmental

© 2024 Kongiwe Environmental (Pty) Ltd

Environmental Authorisation and Integrated Water Use Licence Application for the Recommissioning of the Withok Tailings Storage Facility (TSF), Ekurhuleni, Gauteng Province DMRE reference number: GP158MR

Pre-Application Meeting Minutes: Department Mineral Resources and Energy

Date:	Thursday, 05 September 2024
Time:	10:00-11:00
Venue:	DMRE Offices, 222 Smit St, Braamfontein

List of attendees:

Organisation	Name of attendee	Designation
Department of Mineral Resources and Energy	Mr Nicolas Chavalala	Regional Manager: Environmental Management
Ergo Mining (Pty) Ltd	Mr Greg Ovens	Project Manager
Ergo Mining (Pty) Ltd	Mr Masala Tshamano	Environmental Officer
Kongiwe Environmental (Pty) Ltd	Ms Gerlinde Wilreker	Project Director
Kongiwe Environmental (Pty) Ltd	Ms Thuli Phakathi	Stakeholder Engagement
No apologies		
N/A		

Note: *These minutes are not intended as a verbatim transcript of the meeting, but rather as a summary of the salient discussions which took place.*

1. **Welcome and Introductions**
   - Mr Chavalala welcomed the meeting attendees
   - The attendees introduced themselves

2. **Meeting Agenda:**
   - Purpose of the Meeting
   - Introductions
   - Project Background
   - Project Location
   - Current Status of the Site
   - Project Description
   - Specialist Studies
   - Legislative Framework
   - The Project to Date
   - The Way Forward
   - Questions & Answers

Kongiwe Environmental made a presentation to the Department of Mineral and Energy (DMRE) stakeholders. This presentation is attached as Appendix A.

© 2024 Kongiwe Environmental (Pty) Ltd

3. Discussion

STAKEHOLDER	COMMENT	RESPONSE
Mr Chavalala	Mr Chavalala explained that the process to be followed is correct. There are no further comments on the project itself.	Kongiwe and Ergo noted the comment and thanked Mr Chavalala.
Mr Chavalala	Mr Chavalala indicated that an RoD will be required from the DWS for the Waste Management Licence. He further said that at present there are challenges in obtaining the RoDs from the DWS. This may delay the receipt of a decision on the EA from the DMRE.	The comment was noted.
Mr Chavalala	Mr Chavalala explained that Ergo will need to engage in depth with the DWS.	Mr Ovens indicated that a pre-application meeting and site visit will be held with DWS on 11 September 2024. This will be discussed further with them.
Ms Wilreker	Kongiwe will notify the DMRE of the date when the application for the project will be submitted.	Mr Chavalala noted and thanked Ms Wilreker.

4. Closing

COMMENT	RESPONSE
The Kongiwe project team and Ergo Mine thanked the DMRE attendee for their time and input.	The attendees thanked Kongiwe for the meeting.

The meeting adjourned at 11:00 am.

© 2024 Kongiwe Environmental (Pty) Ltd

Appendix A

Presentation

© 2024 Kongiwe Environmental (Pty) Ltd

Environmental Authorisation and Integrated Water Use Licence Application for the Recommissioning of the Withok Tailings Storage Facility (TSF), Ekurhuleni, Gauteng Province DWS reference number: WU38174

Site Visit Minutes: Department of Water and Sanitation

Date:	Wednesday, 11September 2024
Time:	10:00-11:00
Venue:	Microsoft Teams Online Meeting

List of attendees:

Organisation	Name of attendee	Designation
Department of Water and Sanitation	Ms Thabelo Tshipate	Environmental Officer
Department of Water and Sanitation	Mr Rendani Ndou	Control Environmental Officer
Department of Water and Sanitation	Ms Puseletso Teffo	Candidate Scientific Technician
Department of Water and Sanitation	Mr Khathutshelo Mndau	Environmental Officer
Geo Tail	Mr Guillaume de Swardt	Engineer of record
DRD Gold Limited	Mr Simon Makama	Tailing Superintendent
Fraser Alexander	Mr Matimba Baloyi	Senior Superintendent
Fraser Alexander	Mr Ofentse Phete	Tailings Site Manager
Fraser Alexander	Mr Thabiso Mokoatle	Operations Matimba
Ergo Mining (Pty) Ltd	Mr Greg Ovens	Project Manager
Ergo Mining (Pty) Ltd	Mr Masala Tshamano	Environmental Officer
Kongiwe Environmental (Pty) Ltd	Ms Phumla Mngwengwe	WULA Consultant
Kongiwe Environmental (Pty) Ltd	Ms Gerlinde Wilreker	Project Manager / EAP
Kongiwe Environmental (Pty) Ltd	Ms Anela Fixi	Environmental & Stakeholder Engagement Consultant
Kongiwe Environmental (Pty) Ltd	Mr Ripfumelo Macevele	Environmental Consultant
No apologies		
N/A		

Note: *These minutes are not intended as a verbatim transcript of the meeting, but rather as a summary of the salient discussions which took place.*

1. **Welcome and Introductions**
   - ❖ Mr Phethe welcomed the meeting attendees, and the attendee introduced themselves

2. **Meeting Agenda:**
   - ❖ Purpose of the meeting
   - ❖ Important Notices
   - ❖ Introduction

© 2024 Kongiwe Environmental (Pty) Ltd

- Kongiwe's Role as an independent Environmental Assessment Practitioner
- Project Location
- Project Background
- Project Description: The process
- Project Infrastructure
- Specialist Studies
- Legislative Framework
- Project Progress to date
- Questions and Answers

Kongiwe Environmental made a presentation to the stakeholders. This presentation is attached as Appendix A.

© 2024 Kongiwe Environmental (Pty) Ltd

3. Discussion

STAKEHOLDER	COMMENT	RESPONSE
DWS	How will the stormwater from the Brakpn TSF be managed on the Withok footprint?	Drains will be installed as part of the Brakpan TSF to facilitate water drainage and enhance stability. Drainage will be collected through outlet pipes. The Withok TSF will buttress the Brakpan TSF, and ultimately, runoff from the Brakpan TSF will flow onto the Withok TSF. The water will be reused in Ergo's processes. During construction, water will be collected for construction purposes.
DWS	What other depositions options are available?	The options include lowering the tonnage deposited onto Brakpan to extend its lifespan or sending material to the Daggafontein TSF while the authorization is being processed.
DWS	What material will be used for the construction of the berms that will divert clean and dirty water?	The berms will be constructed from soil.
DWS	Is the water being discharged dirty water?	No, it is stormwater from the Tsakane area that collects in the attenuation dam. The water is then channelled through pipelines that run beneath the Withok footprint.
DWS	Will there be an offset strategy for the wetlands?	Comment noted.
DWS	What activities are currently taking place at the attenuation dam?	The dam wall is located on land owned by Ergo and is therefore considered Ergo property. It is used to control stormwater originating from Tsakane. Dam safety measures will be implemented.
DWS	Is there Dolomite on sit?	There is a pocket of dolomite in the southern section. A geotechnical study has been conducted to confirm this. Ergo has met with the Council of Geoscience to understand the requirements for approval.
DWS	Will GN704 be applied for, and for which activities will it be utilized?	Yes, GN704 will be applied for all relevant activities.
DWS	What studies are being covered? The presentation is focusing only on environmental studies.	In addition to the environmental studies, the following studies have also been undertaken: groundwater, geophysics, stormwater

© 2024 Kongiwe Environmental (Pty) Ltd

STAKEHOLDER	COMMENT	RESPONSE
		management, surface water, dam break analysis, seepage analysis, waste classification. All these studies inform the final design.
DWS	DWS will provide feedback on requirements to ensure all gaps can be addressed.	Noted.
DWS	DWS has requested an additional meeting to further discuss the design.	Noted.
DWS	What will water be used for on-site?	Water will be required during construction. It is possible that water from the plume control boreholes might be used, but this is still to be determined. Dirty water collected from the TSF will be re-used in the operation.
DWS	Will there be a septic tank.	Ergo is still busy with the designs and will confirm the location.
DWS	How is sanitation currently managed on-site.	There is a conservancy tank at the offices which gets emptied 3 times a week.
Kongiwe	A Waste Management Licence is being applied for as part of the EA process. Legally the DWS needs to issue a RoD for waste licences to the DMRE.	Discussions are still underway at higher level regarding this. The authorisation would be covered by the issuing of the WUL for mining related activities.
DWS	What type of waste has been identified?	The identified waste falls under Category 3.
DWS	DWS advised Ergo to align the operation of Brakpan with that of Withok.	Noted

4. Closing

COMMENT	RESPONSE
The Kongiwe project team thanked the DWS attendees for their time and input.	The attendees thanked Kongiwe for the meeting.

The meeting adjourned, and the attendees proceeded to a site visit.

© 2024 Kongiwe Environmental (Pty) Ltd

Appendix A

Presentation

© 2024 Kongiwe Environmental (Pty) Ltd

Environmental Authorisation and Integrated Water Use Licence Application for the Recommissioning of the Withok Tailings Storage Facility, Ekurhuleni (TSF), Gauteng Province
DMRE reference number: GP158MR
DWS reference number: WU38174
Meeting Minutes: Klip River Forum Meeting

Date:	Tuesday, 05 November 2024
Time:	09:00 – 13:00
Venue:	Zoom Online Meeting

List of some of the attendees:

Organisation	Name of attendee	Designation
Department of Water and Sanitation (DWS)	Mr Lesiba Mabona	Klip River Forum Chairman
Federation of Sustainable Development (FSE)	Ms Mariette Liefferink	CEO
Council of Geoscience	Mr Henk Coetzee	Specialist Scientist
Klip SA	Mr Andrew Barker	Chairman
Ergo Mine (Pty) Ltd	Mr Greg Ovens	Project Manager
Kongiwe Environmental (Pty) Ltd	Ms Gerlinde Wilreker	Project Manager
Kongiwe Environmental (Pty) Ltd	Ms Thuli Phakathi	Stakeholder Engagement Consultant
Kongiwe Environmental (Pty) Ltd	Ms Anela Fixi	Environmental & Stakeholder Engagement Consultant
No apologies		
N/A		

Note: *These minutes are not intended as a verbatim transcript of the meeting, but rather as a summary of the salient discussions which took place.*

1. **Welcome and Introductions**
   - Ms Wilreker welcomed the attendees and delivered her presentation.

2. **Meeting Agenda:**
   - Project Background
   - Project Location
   - Stakeholder Meetings
   - Questions and Answers

Kongiwe Environmental made a presentation to the Klip River Forum stakeholders.

© 2024 Kongiwe Environmental (Pty) Ltd

3. Discussion

STAKEHOLDER	COMMENT	RESPONSE
No comments were raised for the Withok Project.		

The meeting adjourned at 1:00 pm.

AGENDA

KLIP RIVER FORUM

Tuesday 05 November 2024
Zoom Virtual Platform
Time: 09:00 – 12:00

---

1. Welcome
2. Introduction of Attendees
3. Apologies
4. Minutes of the Previous Meeting
5. Matters Arising from the Previous Minutes
6. Additions to the Agenda
   - 6.1. _____
7. Items for Presentation
   - 7.1. Withok TSF Recommissioning Project & Valley Silts Expansion project
   - 7.2. _____
8. Water Quality Monitoring and Reporting
   - 8.1. Afrimat (Glen Douglas)
   - 8.2. City of Ekurhuleni
   - 8.3. City of Johannesburg
   - 8.4. Dept. Water & Sanitation
   - 8.5. Erwat
   - 8.6. Harmony Gold
   - 8.7. Heineken SA
   - 8.8. Jo'burg Water
   - 8.9. Midvaal
   - 8.10. Rand Water
   - 8.11. Samancor Metalloys
   - 8.12. Scaw metals SA
   - 8.13. TCTA
   - 8.14. DME
9. Solid Waste Management
10. Government Departments Report Back (5-minutes)
    - 10.1. GDARD
    - 10.2. Dept. Water & Sanitation
      - 10.2.1. AMD Update
      - 10.2.2. CMA Process
      - 10.2.3. Compliance Monitoring & Enforcement (CME)
      - 10.2.4. Water Services Regulation
      - 10.2.5. Water Use Licence Status (WULA)
11. Organisations Report Back (5-minutes)
    - 11.1. Central Rand Gold
    - 11.2. ERGO
12. NGO's Other Report Back (5-minutes)
    - 12.1. Gauteng Wetland Forum
    - 12.2. Klipriviersberg Nature Reserve Association (KNRA)
    - 12.3. KlipSA / KEEDZ
    - 12.4. Federation for Sustainable Association (FSE)
13. Pollution Incidents Noted / Reported
14. Discussion of Additions to the Agenda
15. Next Meeting: TBC
16. Closure

This forum meeting is SACNASP accredited. You may claim ½ a point for attending.

Ergo Mining (Pty) Ltd

Withok TSF Recommissioning Project

Project Notification

DMRE reference number: GP158MR

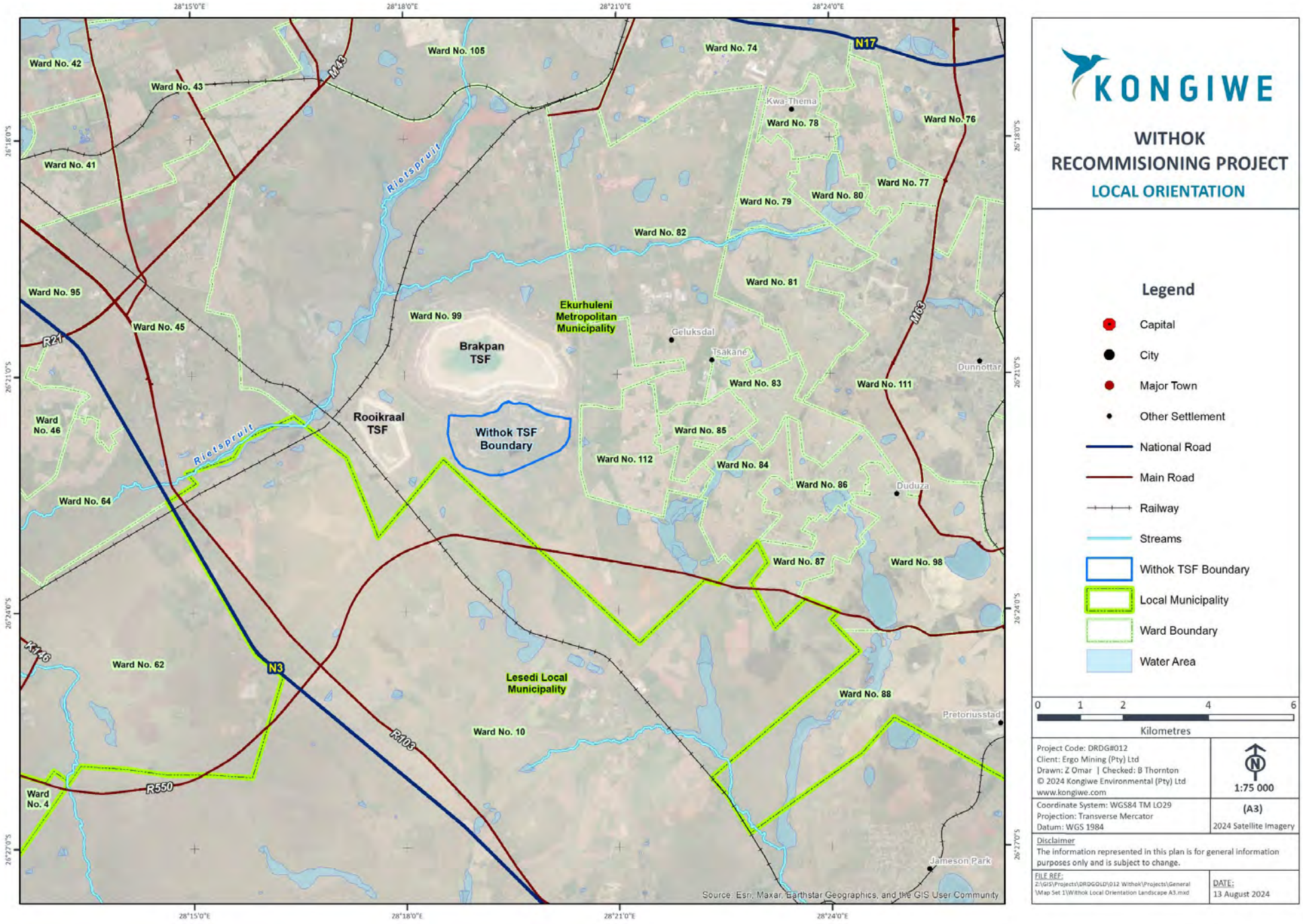
DWS reference number: WU38174

Project Background

- **Applicant**: Ergo Mining (Pty) Ltd, a subsidiary of DRDGOLD Limited (DRD)
- **Activity**: The recommissioning of the Withok TSF (400 Ha)
- **Life of Operation:** 20 years
- Ergo is reprocessing historical 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 will in the future reach its designed capacity and height and as such Ergo has identified the Withok TSF footprint as a potential future deposition site.
- The Withok TSF, situated adjacent and directly south of the Brakpan TSF, is a historic TSF footprint which has previously been reclaimed.
- Withok TSF is essential for the continued LOM of Ergo Mining. The increased deposition capacity created by Withok will allow Ergo Mining the opportunity to continue the reprocessing of numerous large historic tailings facilities.
- The reclamation projects are in line with the objectives of the Gauteng Mine Residue Area Strategy (2011), which are to reclaim and/or rehabilitate TSFs to the point where they become safe for adjacent communities and land can be made available for other purposes.

©2024 Kongiwe Environmental

Project Location



Stakeholder Meetings

- Register with stakeholders@kongiwe.com as an I&AP to receive project information and invitations to meetings and Open Days.
- Public Participation Period: Thursday, 24 October – Friday, 22 November 2024
- **Online Meeting: Wednesday, 06 November 2024**
- **Open Day: Saturday, 09 November 2024** at Tsakane ext.22 Mega Primary School, 19732 Mashimin St &, Shiburi St, Tsakani, Brakpan, 1550

Location	Physical Adress
Online availability	
Kongiwe Environmental website	https://kongiwe.com/projects/
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: stakeholders@kongiwe.com should they require assistance with accessing the DSR/ have queries regarding the Proposed Project.	

© 2024 Kongiwe Environmental

Contact

- **Name: Vanessa Viljoen / Thuli Phakathi**
- **Tel: 010 140 1725/6**
- **Email: Stakeholders@kongiwe.com**

Kongiwe Environmental
150 Bryanston Drive, Bryanston, Sandton, 2191, South Africa.
PostNet Suite no 163, Private Bag X21, Bryanston, 2021, South Africa.

info@kongiwe.com
www.kongiwe.com

© 2024 Kongiwe Environmental

© 2024 Kongiwe Environmental (Pty) Ltd

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

DMRE reference number: GP158MR

DWS reference number: WU38174

Meeting Minutes: City of Ekurhuleni Metropolitan Municipality

Date:	Tuesday, 05 November 2024
Time:	14:00 – 15:00
Venue:	Microsoft Teams Online Meeting

List of attendees:

Organisation	Name of attendee	Designation
City of Ekurhuleni Metropolitan Municipality (CoE)	Mr Papi Msimang	Disaster Management
City of Ekurhuleni Metropolitan Municipality (CoE)	Ms Neo Mphahlele	Acting regional manager for disaster management and Emergency
City of Ekurhuleni Metropolitan Municipality (CoE)	Mr Winston Marumo	Brakpan Area Manager
City of Ekurhuleni Metropolitan Municipality (CoE)	Mr Dudu Twala	Area Manager: Brakpan CCA: City Planning
City of Ekurhuleni Metropolitan Municipality (CoE)	Ms Lilian Matlala	Environmental Officer
City of Ekurhuleni Metropolitan Municipality (CoE)	Ms Cynthia Masango	Disaster Management
Ergo Mine (Pty) Ltd	Mr Josiah Tshisevhe	Strategic Business Unit Manager
Ergo Mine (Pty) Ltd	Mr Masala Tshamano	Environmental Manager
Ergo Mine (Pty) Ltd	Mr Mothusi Mafatshe	Environmental Coordinator
Ergo Mine (Pty) Ltd	Mr Abiot Kekana	Transformation Manger
Ergo Mine (Pty) Ltd	Mr Greg Ovens	Project Manager
Kongiwe Environmental (Pty) Ltd	Ms Gerlinde Wilreker	Project Manager
Kongiwe Environmental (Pty) Ltd	Ms Thuli Phakathi	Stakeholder Engagement Consultant
Kongiwe Environmental (Pty) Ltd	Ms Anela Fixi	Environmental & Stakeholder Engagement Consultant
No apologies		
N/A		

Note: *These minutes are not intended as a verbatim transcript of the meeting, but rather as a summary of the salient discussions which took place.*

1. Welcome and Introductions

- Ms Wilreker welcomed the attendees and delivered her presentation.

© 2024 Kongiwe Environmental (Pty) Ltd

2. Meeting Agenda:

- Purpose of the Meeting
- Important Notice
- Introduction
- Kongiwe's Role as an Independent Environmental Assessment Practitioner
- Project Background
- Project Location
- History of the site
- Current Status of the Site
- Project Description: The Process
- TSF Design
- Technical Details
- Project Infrastructure
- Specialist Studies
- Listed Activities & Water Uses
- Legislative Framework
- Document Availability
- The Way Forward
- Questions & Answers Questions and Answers

Kongiwe Environmental made a presentation to the City of Ekurhuleni Metropolitan Municipality stakeholders. This presentation is attached as **Appendix A**.

© 2024 Kongiwe Environmental (Pty) Ltd

3. Discussion

STAKEHOLDER	COMMENT	RESPONSE
Mr Winston Marumo, Brakpan Area Manager, CoE	Mr Marumo inquired about the location of the project property and whether the proposed site is owned by Ergo or if it is private land.	Ms Wilreker confirmed that the property where the activities are taking place is owned by Ergo. She also mentioned that they would provide Mr Marumo with the farm portion number of the property. ***Post meeting note: The Withok TSF area and proposed project infrastructure are 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,***
Mr Winston Marumo, Brakpan Area Manager, CoE	Mr Marumo stated that he would appreciate it if Kongiwe team could provide him with the stand number.	Mr Ovens provided the requested information in the meeting chat box.
Mr Dudu Twala, Area Manager: Brakpan CCA: City Planning, CoE	Ms Twala inquired about how Tsakane 23 relates to the project.	Ms Wilreker stated that Tsakane is located to the east of the project area and is a potentially affected zone. She mentioned that specialist studies are currently being conducted to assess how the project will impact Tsakane.
Ms Neo Mphahlele, Acting regional manager for disaster management and Emergency, CoE	Ms Mphahlele inquired about the level of involvement of their Environmental Resource Management team in the project. She also asked whether they had been invited to the meeting, noting that the project will have an impact on the environment. Additionally, she inquired whether this was the first meeting or if environmental management officers had been engaged in previous meetings, as she believes their input is critical for this discussion.	Ms Wilreker stated that the CoE environmental officers were invited to the meeting and are aware of it. She further confirmed that this is their first meeting with the CoE officials and that the project documents have been made available to them.
Ms Lilian Matlala, Environmental Officer, CoE	Ms Matlala confirmed that they are aware of the project, as the Environmental Assessment Practitioners (EAPs) for the CoE. She mentioned that they have been liaising with the Kongiwe EAPs handling the project and have received a copy of the scoping report. They will be submitting their comments as required.	The meeting attendees noted Ms Matlala's response.

© 2024 Kongiwe Environmental (Pty) Ltd

STAKEHOLDER	COMMENT	RESPONSE
Mr Dudu Twala, Area Manager: Brakpan CCA: City Planning, CoE	Ms Matlala noted that Ms Wilreker had referred to the MSDF from the City of Johannesburg instead of the City of Ekurhuleni. She further clarified that the CoE has its own MSDF, which is responsible for the City of Ekurhuleni region.	Ms Wilreker explained that Ergo removes mining tailing facilities across both the City of Johannesburg (CoJ) and the City of Ekurhuleni (CoE), which is why both cities were included in the presentation. She further confirmed that for this project, the CoE MSDF is the applicable one.
Mr Greg Ovens, Project Manager, Ergo Mine (Pty) Ltd	Mr Ovens thanked Ms Twala for raising that point and advised the Kongiwe team to ensure that they consider the most up-to-date Special Development Framework available.	Ms Wilreker noted Mr Ovens' advice.
Ms Lilian Matlala, Environmental Officer, CoE	Ms Matlala inquired where the residue from the tailings dam would be transported.	Ms Wilreker clarified that Ergo is involved in multiple projects reclaiming TSFs, some of which are located in the City of Johannesburg and others in the City of Ekurhuleni. Currently, the material is processed at the Ergo plant outside Brakpan, after which the residual tailings are deposited into the Brakpan TSF, located south of Brakpan in City of Ekurhuleni.
Ms Lilian Matlala, Environmental Officer, CoE	Ms Matlala stated that she had identified some discrepancies between the CoJ and CoE, but they will include these in their comments so that Kongiwe can address them in the final scoping report.	Ms Wilreker noted Ms Matlala's comment.
Ms Lilian Matlala, Environmental Officer, CoE	Ms Matlala inquired about the water use licence, asking whether Kongiwe is processing the water use licence in parallel with this application.	Ms Wilreker confirmed that both applications are being processed in parallel, particularly with regard to public participation. She mentioned that they have submitted a pre-application meeting request, held a pre-application meeting, and conducted a site visit with the DWS officials. They are currently finalizing Phase 1 of the water use licence application.
Ms Gerlinde Wilreker, EAP, Kongiwe Environmental	Ms Wilreker thanked the CoE officials for their comments and stated that they will share the presentation, and the minutes of	

© 2024 Kongiwe Environmental (Pty) Ltd

STAKEHOLDER	COMMENT	RESPONSE
	the meeting once finalized. She also mentioned that they look forward to receiving the CoE's comments on the scoping report.	
Mr Greg Ovens, Project Manager, Ergo Mine (Pty) Ltd	Mr Ovens thanked the CoE attendees for availing themselves and providing valuable input. He further clarified that the project is still in its initial stages and requested the CoE officials to review the documents and engage with them, as their feedback will contribute to producing a better final product for the ultimate regulators.	

4. Closing

COMMENT	RESPONSE
Ms Wilreker thanked the City of Ekurhuleni attendees for their time and input.	The City of Ekurhuleni officials thanked Ms Wilreker for the presentation.

The meeting adjourned at 15:00 pm.

© 2024 Kongiwe Environmental (Pty) Ltd

Environmental Authorisation and Integrated Water Use Licence Application for the Recommissioning of the Withok Tailings Storage Facility, Ekurhuleni (TSF), Gauteng Province
DMRE reference number: GP158MR
DWS reference number: WU38174
Meeting Minutes: Broader stakeholders

Date:	Wednesday, 06 November 2024
Time:	10:00 – 10:30
Venue:	Microsoft Teams Online Meeting

List of attendees:

Organisation	Name of attendee	Designation
Lesedi Local Municipality (LLM)	Ms Dineo Makwa	Town Planning Technician
Lesedi Local Municipality (LLM)	Mr Ipfi Mudzanani	Town Planning young graduate
DRDGold Ltd	Ms Leny Sawe	Strategic communication
Ergo Mining (Pty) Ltd	Mr Josiah Tshisevhe	Community Liaise Manager
Ergo Mining (Pty) Ltd	Mr Masala Tshamano	Environmental Manager
Ergo Mining (Pty) Ltd	Mr Greg Ovens	Project Manager
Kongiwe Environmental (Pty) Ltd	Ms Gerlinde Wilreker	Project Manager
Kongiwe Environmental (Pty) Ltd	Ms Anela Fixi	Environmental & Stakeholder Engagement Consultant
Kongiwe Environmental (Pty) Ltd	Ms Thuli Phakathi	Stakeholder Engagement Consultant
No apologies		
N/A		

Note: *These minutes are not intended as a verbatim transcript of the meeting, but rather as a summary of the salient discussions which took place.*

1. **Welcome and Introductions**
   - Ms Wilreker welcomed the attendees and delivered her presentation.

2. **Meeting Agenda:**
   - Project Background
   - Purpose of the Meeting
   - Important Notice
   - Introduction
   - Kongiwe's Role as an Independent Environmental Assessment Practitioner
   - Project Background
   - Project Location
   - History of the site
   - Current Status of the Site
   - Project Description: The Process
   - TSF Design

© 2024 Kongiwe Environmental (Pty) Ltd

- Technical Details
- Project Infrastructure
- Specialist Studies
- Listed Activities & Water Uses
- Legislative Framework
- Document Availability
- The Way Forward
- Questions & Answers Questions and Answers

Kongiwe Environmental made a presentation to stakeholders.

© 2024 Kongiwe Environmental (Pty) Ltd

3. Discussion

STAKEHOLDER	COMMENT	RESPONSE
Ms Dineo Makwa, Town Planning Technician, LLM	Ms Makwa inquired whether any support is required from the Lesedi Local Municipality (LLM), as she noticed that the project falls under the City of Ekurhuleni Metropolitan Municipality.	Ms Wilreker clarified that the LLM was identified as an indirectly affected municipality, as it is adjacent to the project area. She explained that, as part of the public participation process, the municipality needs to be informed about the project.
Ms Dineo Makwa, Town Planning Technician, LLM	Ms Makwa requested that Kongiwe share the presentation and recording with them so that they could review it in detail. She further mentioned that while the LLM currently does not have an environmental officer, they are receiving support from the Sedibeng District Municipality and would circulate the report for comments through that channel.	Ms Wilreker accepted Ms Makwa's suggestion and confirmed that they would forward the presentation and the recording to the LLM for review.

4. Closing

COMMENT	RESPONSE
Ms Wilreker thanked the Lesedi Local Municipality attendees for their time and input.	The Lesedi Local Municipality stakeholders thanked Ms Wilreker for the presentation.

The meeting adjourned at 10:30 am.

© 2024 Kongiwe Environmental (Pty) Ltd

Environmental Authorisation and Integrated Water Use Licence Application for the Recommissioning of the Withok Tailings Storage Facility, Ekurhuleni (TSF), Gauteng Province
DMRE reference number: GP158MR
DWS reference number: WU38174
Meeting Minutes: Ward 99 Councillor

Date:	Wednesday, 06 November 2024
Time:	12:30 – 13:00
Venue:	Microsoft Teams Online Meeting

List of attendees:

Organisation	Name of attendee	Designation
City of Ekurhuleni Metropolitan Municipality	Mr Andile Daemane	Ward 99 Councillor
Ergo Mine (Pty) Ltd	Mr Josiah Tshisevhe	Community Liaison Officer
Kongiwe Environmental (Pty) Ltd	Ms Gerlinde Wilreker	Project Manager
Kongiwe Environmental (Pty) Ltd	Ms Anela Fixi	Environmental & Stakeholder Engagement Consultant
Kongiwe Environmental (Pty) Ltd	Ms Thuli Phakathi	Stakeholder Engagement Consultant
Kongiwe Environmental (Pty) Ltd	Ms Vanessa Viljoen	Senior Stakeholder Engagement Consultant
No apologies		
N/A		

Note: *These minutes are not intended as a verbatim transcript of the meeting, but rather as a summary of the salient discussions which took place.*

1. **Welcome and Introductions**
   - Ms Wilreker welcomed the attendees and delivered the presentation.

2. **Meeting Agenda:**
   - Purpose of the Meeting
   - Important Notice
   - Introduction
   - Kongiwe's Role as an Independent Environmental Assessment Practitioner
   - Project Background
   - Project Location
   - History of the site
   - Current Status of the Site
   - Project Description: The Process
   - TSF Design
   - Technical Details
   - Project Infrastructure

© 2024 Kongiwe Environmental (Pty) Ltd

- Specialist Studies
- Listed Activities & Water Uses
- Legislative Framework
- Document Availability
- The Way Forward
- Questions & Answers Questions and Answers

Kongiwe Environmental made a presentation to the Ward 99 councillor.

© 2024 Kongiwe Environmental (Pty) Ltd

3. Discussion

STAKEHOLDER	COMMENT	RESPONSE
Mr Andile Daemane, Ward 99 Cllr, CoE	Mr Daemane sought clarification on whether the specialists identified for the project might come up with different outcomes during the EIA stage that could potentially stop the project. He also requested further explanation on what the EIA stage entails.	Ms Wilreker explained that the Environmental Impact Assessment (EIA) is the second phase of the project. Currently, the project is at the scoping phase, which is the initial stage where the background of the study is being assessed and the project is being introduced to the public. During the EIA phase, specialist studies will be conducted to assess the potential impacts of the project. The specialists will present their findings, highlighting the identified impacts and how they can be prevented or mitigated. The specialists will also determine whether the project poses too many risks to operate or if its impacts are not severe enough to prevent it from moving forward.
Mr Andile Daemane, Ward 99 Cllr, CoE	Mr Daemane inquired about the anticipated questions the community might have, noting that one of the key concerns on his mind is the health impact of the proposed project	Ms Wilreker explained that, from an environmental perspective, they anticipate concerns related to dust and air quality, and how these factors could affect health. She added that, from an economic standpoint, the community would likely be interested in understanding how they would benefit from the project. She noted that these are the types of questions commonly raised in community projects.
Mr Andile Daemane, Ward 99 Cllr, CoE	Mr Daemane inquired about the response the Kongiwe team would provide if the community raised concerns regarding the impact of dust on their lives.	Ms Wilreker explained that specialists are conducting studies to determine the direction of dust dispersion and identify which areas will be most or least impacted. However, she clarified that the project is still in its initial stage and the exact

© 2024 Kongiwe Environmental (Pty) Ltd

STAKEHOLDER	COMMENT	RESPONSE
		details of the impact are not yet available. At this stage, the focus is on gathering and considering the community's concerns to ensure that the specialists address those concerns in their assessments.
Mr Andile Daemane, Ward 99 Cllr, CoE	Mr Daemane inquired whether the specialists' research includes the economic aspects of the project, how the communities will benefit and the potential impact of dust on their livestock.	Ms Wilreker stated that the economic aspects of the project will be addressed in the next phase. However, she confirmed that the specialist Air Quality Assessment Report will include an assessment of the potential impact that dust might have on the community's livestock
Mr Andile Daemane, Ward 99 Cllr, CoE	Mr Daemane inquired about the anticipated duration of the proposed project.	Ms Wilreker stated that the project is anticipated to last for 20 years, or until the project site reaches its full capacity.
Mr Tshisevhe Josiah, Community Liaison Officer, Ergo Mine (Pty) Ltd	Mr Tshisevhe explained to the councillor the purpose of the project and outlined what the community should expect, highlighting the key benefits and outcomes for residents.	Mr Daemane thanked Mr Tshisevhe for the explanation and confirmed that all his concerns had been addressed.
Mr Andile Daemane, Ward 99 Cllr, CoE	Mr Daemane inquired about the expected timeline for the project's commencement.	Ms Wilreker explained that the project is still in its initial stage. Once they receive authorization from the DMRE and DWS, the project may commence.
Ms Gerlinde Wilreker, Project Manager, Kongiwe Environmental (Pty) Ltd	Ms Wilreker encouraged the councillor to send any further questions or comments that may arise during the course of the project in writing to stakeholders@kongiwe.com and assured that the Kongiwe team would respond accordingly.	Mr Daemane noted Ms Wilreker suggestion.

© 2024 Kongiwe Environmental (Pty) Ltd

4. Closing

COMMENT	RESPONSE
Ms Wilreker thanked Mr Daemane for his time and input.	Mr Daemane thanked Ms Wilreker for the presentation.

The meeting adjourned at 13:00 pm.

© 2024 Kongiwe Environmental (Pty) Ltd

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

DMRE reference number: GP158MR

DWS reference number: WU38174

Meeting Minutes: Blesbokspruit Forum

Date:	Thursday, 07 November 2024
Time:	09:00 – 10:30
Venue:	Microsoft Teams Online Meeting

List of attendees:

Organisation	Name of attendee	Designation
Department of Water and Sanitation (DWS)	Mr Lesiba Phillimon Khwinana	Control Environmental Officer, Blesbokspruit and Rietspruit Catchment Forum Chairperson
Rand Water	Mr Marc de Fontaine	Senior Water Quality Advisor
Federation for a Sustainable Environment	Ms Mariette Liefferink	CEO
Council for Geoscience	Mr Henk Coetzee	Specialist Scientist
Kongiwe Environmental (Pty) Ltd	Ms Gerlinde Wilreker	Project Manager
Kongiwe Environmental (Pty) Ltd	Ms Anela Fixi	Environmental & Stakeholder Engagement Consultant
No apologies		
N/A		

Note: *These minutes are not intended as a verbatim transcript of the meeting, but rather as a summary of the salient discussions which took place.*

1. **Welcome and Introductions**
   - ❖ Ms Wilreker welcomed the attendees and delivered her presentation.

2. **Meeting Agenda:**
   - ❖ Project Background
   - ❖ Project Location
   - ❖ Stakeholder Meetings
   - ❖ Questions and Answers

Kongiwe Environmental made a presentation to the Blesbokspruit Forum stakeholders.

© 2024 Kongiwe Environmental (Pty) Ltd

3. Discussion

STAKEHOLDER	COMMENT	RESPONSE
Mr Marc de Fontaine, Senior Water Quality Advisor, Rand Water	Mr de Fontaine asked about the potential impact of having two relatively large, almost "mega" dumps in close proximity to one another. He raised concerns about possible underground activity, such as the movement of water, and whether their proximity could lead to any interaction or destabilization. He noted that this question could be addressed at a later stage.	Ms Wilreker acknowledged the question, stating that unfortunately there wasn't an immediate answer. She assured Mr de Fontaine that the issue would be raised with the engineers currently designing the facility, as well as the groundwater specialists, who would be able to provide a detailed response. She thanked him and assured that the matter was noted.
Ms Mariette Liefferink, CEO, Federation for a Sustainable Environment	Ms Liefferink raised several important concerns regarding the expansion of the Brakpan Tailings Storage Facility (TSF) and its potential long-term impact. She referred to a paper presented in 2008, titled '*South African Challenges Pertaining to Mine Closure, Regional Mining, and Closure Strategy*', which highlighted issues related to incomplete dump reclamation. She noted that remining of dumps often fails due to either lack of funding or the heterogeneous nature of the dumps, which can make them difficult to process. She expressed concern about the expansion of the Brakpan TSF, particularly the need to ensure that even economically non-viable deposits are also remined, in alignment with recommendations from the Council for Geoscience. She emphasized that tailings storage facilities like Brakpan TSF,	Ms Wilreker acknowledged Ms Liefferink's concerns and assured that the Global Industry Standard on Tailings Management (GISTM) is being considered in the design of the project. She also emphasized that South Africa has its own norms, standards, and regulations regarding the design of tailings storage facilities, all of which are being taken into account. She assured that the team is mindful of both the environmental and socio-economic aspects of the project.

© 2024 Kongiwe Environmental (Pty) Ltd

STAKEHOLDER	COMMENT	RESPONSE
	particularly after expansion, would likely stand indefinitely, and it was crucial to have robust management measures in place throughout all phases of the project, including the post-closure phase. Ms Liefferink urged that the project adhere to the Global Industry Standard on Tailings Management (GISTM), as this would ensure comprehensive management measures are maintained throughout the entire lifespan of the facility, including after closure. Additionally, she recommended that economic diversification and succession planning be integrated into the remining process. She highlighted the example of the Riverlea community, where DRDGOLD (ERGO Mining), in collaboration with Umsizi and other local organizations, established a successful community garden. Ms Liefferink encouraged similar initiatives that would benefit mining-affected communities, contributing to their socio-economic development.	
Mr Henk Coetzee, Specialist Scientist, Council for Geoscience	Mr Coetzee raised a concern regarding the Klip River, specifically noting an increase in sulphide electrical conductivity (EC) in the Rietspruit area. He asked whether this issue was being taken into account in the design to ensure that the project would not exacerbate the problem	Ms Wilreker confirmed that the Withok TSF is being designed with a class three liner, as required by the relevant departments. This design is specifically intended to prevent groundwater ingress and mitigate potential contamination issues.

© 2024 Kongiwe Environmental (Pty) Ltd

STAKEHOLDER	COMMENT	RESPONSE
	and, ideally, would help mitigate it as part of the closure processes.	

4. Closing

COMMENT	RESPONSE
Ms Wilreker thanked the Blesbokspruit forum attendees for their time and input.	Mr Khwinana thanked Ms Wilreker for the presentation.

The meeting adjourned at 10:30 am.

AGENDA
BLESBOKSPRUIT FORUM
Thursday 07 November 2024
Zoom Online Platform
09:00 – 13:00

---

1. Welcome
2. Introduction of Attendees
3. Apologies
4. Minutes of the Previous Meeting
5. Matters Arising from the Previous Minutes
6. Additions to the Agenda
   - 6.1. _____
   - 6.2. _____
   - 6.3. _____
   - 6.4. _____
   - 6.5. _____
7. Items for Presentation:
   - 7.1 Withok TSF recommissioning project presentation by Thuli Phakathi
8. Water Quality Monitoring and Reporting
   - 8.1. City of Ekurhuleni
   - 8.2. Dept. Water & Sanitation
   - 8.3. Erwat
   - 8.4. Lesedi Municipality
   - 8.5. Rand Water
   - 8.6. TCTA
   - 8.7. Sibanye Stillwater
   - 8.8. New Kleinfontein Gold Mine
   - 8.9. Nigel Brick & Clay
9. Solid Waste Management
10. Government Departments Report Back (5-minutes)
    - 10.1. GDARD
    - 10.2. Dept. Mineral Resources
    - 10.3. Dept. Water & Sanitation
      - 10.3.1. AMD Eastern Basin Update (TCTA)
      - 10.3.2. CMA Process
      - 10.3.3. Compliance Monitoring & Enforcement (CME)
      - 10.3.4. Water Services Regulation
      - 10.3.5. Water Use Licence Application (WULA) Status
11. Local Authorities Report Back (5-minutes)
    - 11.1. City of Ekurhuleni
    - 11.2. Lesedi Municipality
12. Organisations Report Back (5-minutes)
    - 12.1. ACSA
    - 12.2. Burnstone Gold Mine (Sibanye Stillwater)
    - 12.3. Calodex
    - 12.4. Comet Abattoir
    - 12.5. EBM Projects
    - 12.6. Enstra Paper
    - 12.7. Enviroserv
    - 12.8. Ergo
    - 12.9. Erwat

This forum meeting is SACNASP accredited. You may claim ½ a CPD point for attending.

12.10. Gold Plat
12.11. Ilangabi Investments (Brikor Mine)
12.12. Impala Platinum
12.13. Karan Beef
12.14. Kimberly Clarke
12.15. Largo / Ukufisa Colliery
12.16. Mpact Paper
12.17. New Kleinfontein Gold Mine
12.18. Precious Metal Refinery (Sibanye Stillwater)
12.19. Nigel brick and clay

13. NGO's / Other Report Back (5-minutes)
    13.1. Gauteng Wetland Forum
    13.2. GrootvalyBlesbokspruit Trust
    13.3. Korsman Conservancy
    13.4. Federation For a Sustainable Environment (FSE)
14. Pollution Incidents Noted / Reported
15. Discussion of Additions to the Agenda
16. Next Meeting
17. Closure

Ergo Mining (Pty) Ltd

Withok TSF Recommissioning Project

Project Notification

DMRE reference number: GP158MR

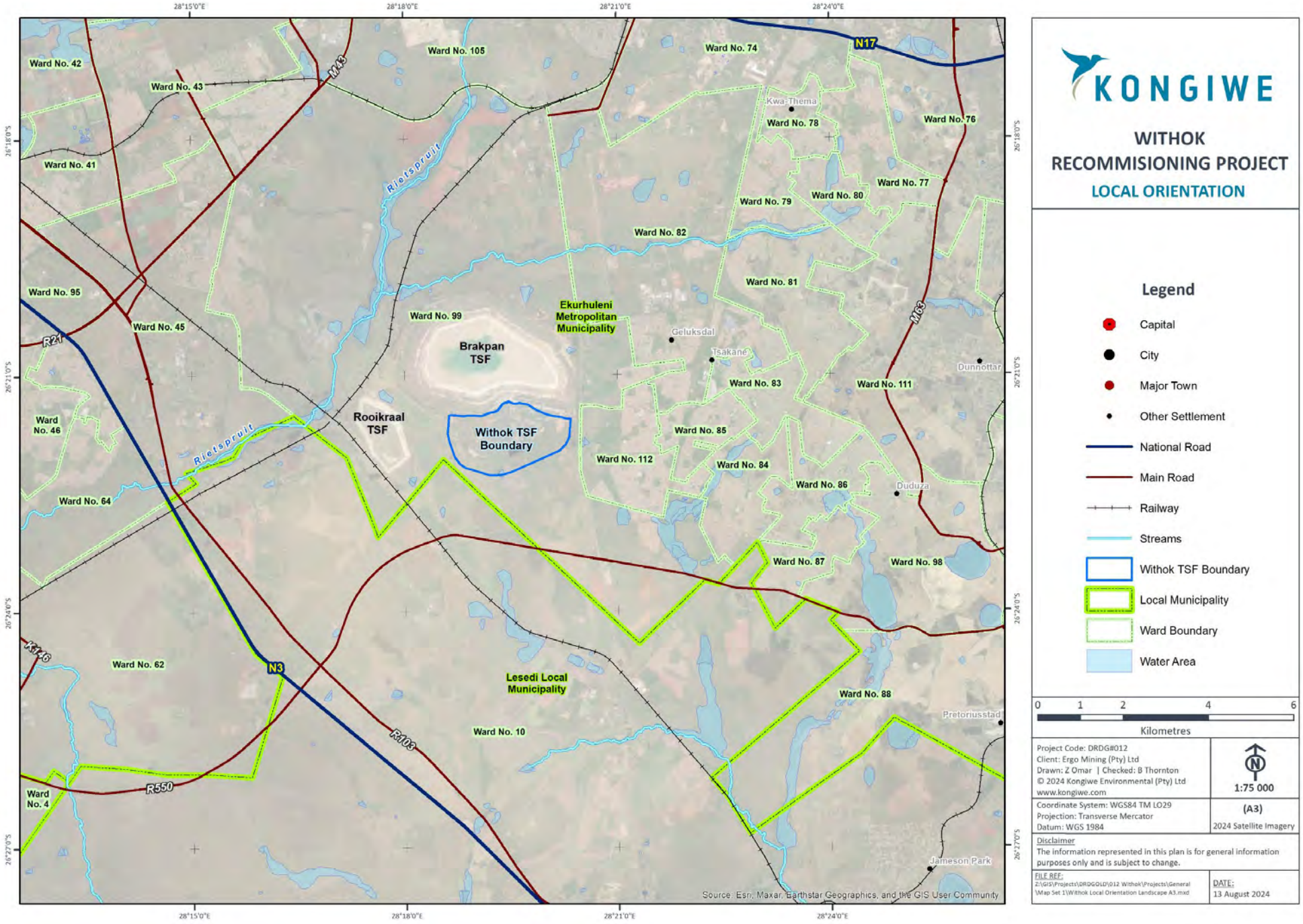
DWS reference number: WU38174

Project Background

- **Applicant**: Ergo Mining (Pty) Ltd, a subsidiary of DRDGOLD Limited (DRD)
- **Activity**: The recommissioning of the Withok TSF (400 Ha)
- **Life of Operation:** 20 years
- Ergo is reprocessing historical 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 will in the future reach its designed capacity and height and as such Ergo has identified the Withok TSF footprint as a potential future deposition site.
- The Withok TSF, situated adjacent and directly south of the Brakpan TSF, is a historic TSF footprint which has previously been reclaimed.
- Withok TSF is essential for the continued LOM of Ergo Mining. The increased deposition capacity created by Withok will allow Ergo Mining the opportunity to continue the reprocessing of numerous large historic tailings facilities.
- The reclamation projects are in line with the objectives of the Gauteng Mine Residue Area Strategy (2011), which are to reclaim and/or rehabilitate TSFs to the point where they become safe for adjacent communities and land can be made available for other purposes.

©2024 Kongiwe Environmental

Project Location



Stakeholder Meetings

- Register with stakeholders@kongiwe.com as an I&AP to receive project information and invitations to meetings and Open Days.
- Public Participation Period: Thursday, 24 October – Friday, 22 November 2024
- **Online Meeting: Wednesday, 06 November 2024**
- **Open Day: Saturday, 09 November 2024** at Tsakane ext.22 Mega Primary School, 19732 Mashimin St &, Shiburi St, Tsakani, Brakpan, 1550

Location	Physical Adress
Online availability	
Kongiwe Environmental website	https://kongiwe.com/projects/
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: stakeholders@kongiwe.com should they require assistance with accessing the DSR/ have queries regarding the Proposed Project.	

© 2024 Kongiwe Environmental

Contact

- **Name: Vanessa Viljoen / Thuli Phakathi**
- **Tel: 010 140 1725/6**
- **Email: Stakeholders@kongiwe.com**

Kongiwe Environmental
150 Bryanston Drive, Bryanston, Sandton, 2191, South Africa.
PostNet Suite no 163, Private Bag X21, Bryanston, 2021, South Africa.

info@kongiwe.com
www.kongiwe.com

© 2024 Kongiwe Environmental

© 2024 Kongiwe Environmental (Pty) Ltd

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

DMRE reference number: GP158MR

DWS reference number: WU38174

Meeting Minutes: Department of Public Works and Infrastructure

Date:	Thursday, 07 November 2024
Time:	14:00 – 14:30
Venue:	Microsoft Teams Online Meeting

List of attendees:

Organisation	Name of attendee	Designation
Department of Public Works and Infrastructure (DPWI)	Mr Zakhele Ndebele	Real Estate Management Services
Ergo Mine (Pty) Ltd	Mr Masala Tshamano	Environmental Manager
Ergo Mine (Pty) Ltd	Mr Greg Ovens	Project Manager
Kongiwe Environmental (Pty) Ltd	Ms Gerlinde Wilreker	Project Manager
Kongiwe Environmental (Pty) Ltd	Ms Anela Fixi	Environmental & Stakeholder Engagement Consultant
No apologies		
N/A		

Note: *These minutes are not intended as a verbatim transcript of the meeting, but rather as a summary of the salient discussions which took place.*

1. **Welcome and Introductions**
   - Ms Wilreker welcomed the attendees and delivered her presentation.

2. **Meeting Agenda:**
   - Purpose of the Meeting
   - Important Notice
   - Introduction
   - Kongiwe's Role as an Independent Environmental Assessment Practitioner
   - Project Background
   - Project Location
   - History of the site
   - Current Status of the Site
   - Project Description: The Process
   - TSF Design
   - Technical Details
   - Project Infrastructure
   - Specialist Studies
   - Listed Activities & Water Uses

© 2024 Kongiwe Environmental (Pty) Ltd

- Legislative Framework
- Document Availability
- The Way Forward
- Questions & Answers Questions and Answers

Kongiwe Environmental made a presentation to the Department of Public Works and Infrastructure stakeholder.

© 2024 Kongiwe Environmental (Pty) Ltd

3. Discussion

STAKEHOLDER	COMMENT	RESPONSE
Mr Zakhele Ndebele, Real Estate Management Services, DPWI	Mr Ndebele expressed his gratitude to the Kongiwe team for informing his department about the project. He further stated that, at this stage, they do not have any significant comments but will thoroughly review the draft scoping report and provide their feedback in due course.	The project team welcomed Mr Ndebele's comment

4. Closing

COMMENT	RESPONSE
Ms Wilreker thanked Mr Ndebele for his time and input.	Mr Ndebele thanked Ms Wilreker for the presentation.

The meeting adjourned at 14:30 pm.

© 2024 Kongiwe Environmental (Pty) Ltd

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

DMRE reference number: GP158MR

DWS reference number: WU38174

Meeting Minutes: Open Day

Date	Saturday, 9 November 2024
Time:	09H00 – 12H00
Venue:	Tsakane Mega Primary School

List of attendees from the Project Team:

Organisation	Name of attendee	Designation
Ergo Mining (Pty) Ltd	Mr Greg Ovens	Project Manager
Ergo Mining (Pty) Ltd	Mr Ofentse Phete	Brakpan TSF Manager
Ergo Mining (Pty) Ltd	Mr Masala Tshamano	Environmental Manager
Ergo Mining (Pty) Ltd	Mr Josiah Tshisevhe	Community Liaise Officer
Kongiwe Environmental (Pty) Ltd	Ms Gerlinde Wilreker	Project Manager
Kongiwe Environmental (Pty) Ltd	Ms Anela Fixi	Stakeholder Engagement
Kongiwe Environmental (Pty) Ltd	Ms Thuli Phakathi	Stakeholder Engagement
Kongiwe Environmental (Pty) Ltd	Ms Vanessa Viljoen	Stakeholder Engagement
Kongiwe Environmental (Pty) Ltd	Mr Bradly Thornton	CEO
Kongiwe Environmental (Pty) Ltd	Mr Ripfumelo Macevele	Environmental Consultant
Kongiwe Environmental (Pty) Ltd	Ms Phumla Mngwengwe	Environmental Consultant
Kongiwe Environmental (Pty) Ltd	Ms Chelsea Strooh	GIS consultant

Note: A list of stakeholders who attended the Open Day will be added in Appendix A to these minutes.

Note: *These minutes are not intended as a verbatim transcript of the meeting, but rather as a summary of the salient discussions which took place.*

Welcome and Introductions

The project team welcomed all Open Day attendees upon arrival.

The purpose of the Open Day was to:

- Present and discuss the proposed Recommissioning of the Withok Tailings Storage Facility Project**;**
- Provide an overview of the Scoping Report and the Integrated Water Use Licence Application (IWULA) processes;
- Provide the stakeholders with an opportunity to raise comments/seek clarity and provide input into the Project; and

© 2024 Kongiwe Environmental (Pty) Ltd

- Record comments raised and then include them in the Comments and Responses Report (CRR) which will be integrated into the Scoping Report, and the IWULA.

Open Day Agenda:

- Kongiwe's Role as an Independent Environmental Assessment Practitioner;
- Stakeholder Role;
- Public Participation Process;
- Stakeholder Engagement;
- Way Forward;

Please refer to **Appendix B** for the posters that were on display.

© 2024 Kongiwe Environmental (Pty) Ltd

STAKEHOLDER	COMMENT	RESPONSE
Mr Sibanyoni, Council Office	Mr Sibanyoni inquired if the cultural studies were conducted.	Ms Wilreker indicated that a Heritage study is currently underway, and at present, there are no graves or items of historical significance identified. She further explained that the area designated for development was historically a Tailings Storage Facility (TSF). However, the final results of the Heritage study will be fully addressed during the Environmental Impact Assessment (EIA) phase.
Community Member	The community member inquired whether studies on socio-economic impacts, pollution, and biodiversity had been undertaken.	Ms Wilreker confirmed that socio-economic and biodiversity studies, amongst others, were being undertaken. She indicated that the studies are still ongoing, and the findings will be discussed during the EIA phase.
Community Member	The community member inquired whether the community would benefit from the project.	Mr Phete (Ergo) explained that once all the studies are completed, their findings will be presented during the EIA phase, which will inform Ergo of potential employment opportunities.
Mr Sibanyoni, Council Office	Mr Sibanyoni inquired whether the environmental studies currently being undertaken are assisting the mine in obtaining its mining right.	Mr Phete explained that Ergo already holds a mining right. The studies being conducted are specifically for the proposed Recommissioning of the Withok TSF project.
Mr Sibanyoni, Council Office	Mr Sibanyoni inquired about the current DRDGOLD SLP and requested if it could be shared with him.	Mr Phete indicated that the SLP would be shared with Mr Sibanyoni through the Ward Councillor. However, Mr Sibanyoni could also access it via the website. Mr Phete emphasized that the SLP is unrelated to the proposed project and should not be confused with it.
Mr Joshuah, Community Member, Ward 112	Mr Joshuah expressed his appreciation for the public participation efforts made by Kongiwe Environmental prior to the commencement of the project. He also conveyed his gratitude that the project will benefit the community	Ms Wilreker and Mr Phete noted the comment.

© 2024 Kongiwe Environmental (Pty) Ltd

STAKEHOLDER	COMMENT	RESPONSE
Community Member	The community member inquired whether sustainable projects would be implemented during the operational phase of the project.	Mr Phete indicated that these matters will be addressed during the operational phase. At present, the priority is to gather the community's concerns to secure the necessary authorization.
Community Member	The community member suggested that the surrounding wards submit proposals to Ergo outlining their community needs.	Mr Phete acknowledged the comment but emphasized that while the mine is willing to assist where possible, the local government should take the lead in addressing community needs.
Community Member	The community member inquired about the design of the dam structure.	Ms Wilreker explained that DRDGOLD has a Tailings Management Policy and a Tailings Storage Facility (TSF) Management Standard in place. The company is committed to adhering to these and is aiming to align with the Global Industry Standard on Tailings Management (GISTM), where applicable. The Withok TSF will be designed, constructed, and managed in accordance with the Code of Practice for Mine Residue Deposits (SANS 10286) and the Dam Safety Regulations (GNR. 139 of 24 February 2012), as well as the following: SA Dam Safety Classification: Under the National Water Act (NWA), dams of a certain size must be classified. The Classification system is similar to SANS 10286, though the criteria differ slightly. Dams over 5 meters in height and containing more than 50,000m³ of water must be registered with the Dam Safety Office (DSO) of the Department of Water and Sanitation (DWS), who will classify the dam based on data submitted by the applicant. The Withok TSF will be classified as a Category III dam. The Withok TSF must be designed by an Approved Professional Person (APP), leading an Approved Professional Team (APT). Applications for approval of the

© 2024 Kongiwe Environmental (Pty) Ltd

STAKEHOLDER	COMMENT	RESPONSE
		APP will be submitted to both the DWS DSO and the Engineering Council of South Africa (ECSA).
Community Member	The community member inquired whether permanent job opportunities would be available after the construction phase.	Ms Wilreker explained that Ergo will have the opportunity to assess potential employment opportunities after the completion of the EIA phase, which will guide its decisions.
Mr Joshuah, Community Member, Ward 112	Mr Joshuah raised a concern that Ergo should not work with individuals who claim to represent the community but have criminal intentions.	Ms Wilreker noted the comment.
Community Members	The community members explained that they are affected by dust from the Brakpan TSF, which can become so intense that visibility at a distance is severely reduced.	Ms Wilreker acknowledged the comment and expressed appreciation, noting that it would help guide the specialists in assessing the full extent of the impact.
Community Member	The community member inquired whether radioactivity studies had been conducted.	Ms Wilreker indicated that the specialist is still undertaking the study, and the findings will be presented during the EIA phase.
Community Member	The community member requested an additional mobile clinic, as the surrounding communities currently share a single mobile clinic.	Ms Wilreker noted the comment and explained that it would be shared with Ergo.
Ms Nthabiseng Thobakgale (SGB - Mega Primary School)	Ms Thobakgale inquired whether; after obtaining the Environmental Authorisation and initiating the recommissioning of the TSF, the applicant continues to assess the project's impact or does this assessment conclude at the end of the EIA phase?	Ms Mngwengwe indicated that the assessment of the project's impact does not conclude at the end of the EIA process. While the EIA provides a thorough evaluation of potential impacts prior to project commencement, ongoing monitoring and assessment are undertaken throughout the project's lifecycle, to assist in identifying and addressing any unpredicted impacts and ensuring compliance with environmental regulations.
Ms Nthabiseng Thobakgale, SGB Member- Mega Primary School	Ms Thobakgale asked if they could be provided with information on how to protect themselves from the project impacts in terms of health.	Ms Mngwengwe noted the comment.

© 2024 Kongiwe Environmental (Pty) Ltd

STAKEHOLDER	COMMENT	RESPONSE
	Ms Thobakgale requested that the response be forwarded via email.	
Mr Lawrence Ward Committee 99	Mr Lawrence asked how the community, in particularly residents in Ward 99, will benefit in terms of employment and other economic opportunities.	Ms Mngwengwe explained that the local people will be considered for employment and economic opportunities and that the approach aims to enhance community engagement and ensure that the benefits of economic development are felt within the local population
Ms Nomadlozi Mofokeng	Ms Mofokeng inquired about the requirements to be considered for economic opportunities.	Ms Mngwengwe explained that following the completion of the EIA process and the subsequent granting of Environmental Authorisation by DMRE, the applicant will determine the skills required for the recommissioning of the Withok TSF. She further indicated the information regarding economic possibilities will be distributed through advertising with relevant requirements.
Mr Bheki Mtshali, Ward 99	Mr Mtshali inquired about the impacts of deposition of mining material on groundwater and the effects of blasting.	Ms Mngwengwe explained that the Groundwater Impact Assessment will be conducted to evaluate the potential impacts of the proposed project and to identify appropriate mitigation measures. One of the primary concerns is the risk of seepage from the TSF, which could contaminate groundwater if not managed effectively. She said to address this, that the facility will be lined with an HDPE liner to prevent seepage. Additionally, comprehensive groundwater management plans that include monitoring of groundwater will be implemented. She further said it is important to note that no blasting will take place on-site. The proposed project is not a mining project, it only involves the deposition of final residue within the Withok TSF. The recommissioning of the Withok TSF will utilise a methodology similar to that previously employed, specifically cyclone deposition combined with a floating decant pumping system.

© 2024 Kongiwe Environmental (Pty) Ltd

STAKEHOLDER	COMMENT	RESPONSE
Ms Phephelaphi Cynthia Tshabalala	Ms Tshabalala asked about the economic opportunities that will arise from the recommissioning of the TSF. Will there be considerations for including individuals with disabilities in these opportunities?	Ms Mngwengwe explained that opportunities that could result from the proposed project could include job creation and local business support. However, the applicant will determine the skills and services required for the recommissioning of the Withok TSF. Individuals with disabilities will be considered for these opportunities.
Ms Phephelaphi Cynthia Tshabalala	Ms Tshabalala inquired how long will it take to get the Environmental Authorisation.	Ms Mngwengwe said that the Environmental Authorisation process takes about a year to conclude.
Mr Bongani Daemane	Mr Daemane commented that the Recommissioning of the TSF project is still in its early stage.	Ms Mngwengwe said that Mr Daemane was correct and that the EIA is part of the planning phase of the development. She further explained that the project will undergo evaluations by DMRE (Competent Authority), and they will decide to grant or reject the application. No project will commence without the Environmental Authorisation.
Ms Khosi Malaka, Ward 85	Ms Malaka raised the following concerns regarding the Brakpan TSF and its impact on the community in Ward 85: • **Health Impacts from Dust Emissions** Ms Malaka highlighted the significant negative impact of dust emissions from the Brakpan TSF, which are causing health issues among local residents. She emphasized the need for immediate action to mitigate these effects. • **Lack of Action by Fraser Alexander** She expressed concern that Fraser Alexander has not taken steps to address the dust problem or implement any corrective measures to protect the community. • **Absence of Community Development Contributions**	Mr Phete expressed that he was thankful that Mr Malaka highlighted the significant issues related to the TSF and its impact on the community in Ward 85. He said that he understands the concerns regarding the dust emissions and their health implications for residents. As part of its tailings management efforts, Ergo is actively working to mitigate dust from the TSF. While he acknowledges that the dust situation was more severe 5 years ago, Ergo has made noticeable progress, including the ongoing vegetation of the slope embankment of the TSF. However, he agrees that there is still more work to be done to further improve the situation. The concerns are duly noted and will be addressed in Ergo's quarterly dust fall-out meetings. Currently, Ergo has engaged independent specialists to conduct dust monitoring. Their findings are taken seriously, and Ergo implements their recommendations to enhance the dust management strategies. In relation to the proposed project, the EIA process and the Air Quality Impact Assessment

© 2024 Kongiwe Environmental (Pty) Ltd

STAKEHOLDER	COMMENT	RESPONSE
	Ms Malaka also pointed out that Fraser Alexander has not made any contributions to essential community development projects, such as the construction of crèches, soccer fields, or parks, which are vital for improving the quality of life in the area. • **Lack of Reporting by Ward Councillor** Ms Malaka expressed frustration that the ward councillor has not provided updates or reports on the status of the Brakpan TSF project, leaving the community uninformed about its progress and potential impacts. • **Objection to the Recommissioning of the TSF** Lastly, Ms Malaka stated her personal objection to the recommissioning of the TSF, as she believes it will exacerbate the existing environmental and health issues in the community. Ms Malaka further expressed that she strongly advocated for the open day to be held in Ward 85, as this is where the most directly affected residents live. Community members from Ward 112 and 99 must also be invited to participate in this discussion, ensuring that all voices are heard regarding the TSF's operations and their effects on their communities.	will thoroughly evaluate the potential and cumulative impacts and appropriate mitigation measures will be developed. He said that Ms Malaka's inputs are invaluable in identifying shortcomings in efforts to improve the dust situation, and encouraged residents to report such concerns, as they are directly affected. It is crucial to submit formal concerns in situations like this, as informal feedback can easily be overlooked. And also, by formalising her concerns, Ma Malaka will be able to follow up on responses. Mr Phete indicated that he understands Ms Malaka's objection to the recommissioning of the TSF, particularly given the potential for worsening existing issues. Active efforts are being made to improve the current condition. He fully supports the call for the Open Day to be held in Ward 85, where the most affected residents reside. This is an important scoping phase, and the issues raised will be taken into account during the consultation for the Environmental Impact Report (EIR) phase ***Post meeting note: The TSF is located in Ward 99, with Ward 112 being directly adjacent to the project site. Ward 85 is located further away from the site but will be assessed in terms of extent of impacts.***
Mr Bafana Maseko	Mr Maseko indicated that they are experiencing issues with dust emissions from the Brakpan TSF. What mitigation measures are being implemented to address this problem?	Mr Phete indicated that there are ongoing efforts to revegetate the dust sources at the Brakpan TSF. Together with these efforts, dust monitoring is conducted to inform and guide the mitigation strategy effectively. The

© 2024 Kongiwe Environmental (Pty) Ltd

STAKEHOLDER	COMMENT	RESPONSE
		findings from the EIA Report and the Air Quality Impact Assessment study will further enhance the mitigation measures that will be implemented
Mr Bafana Maseko	Mr Maseko inquired about the deadline for the commenting period.	Ms Mngwengwe explained that stakeholders are welcome to share their comments with Kongiwe until the 22nd of November 2024.
Ms Agnes Magavu	Ms Magavu inquired about the opportunities available for people with disabilities and requested the provision of an interpreter for members of the deaf community.	Mr Tshisevhe explained that employment opportunities would be considered in the second stage of the project, as the current stage is focused on the introduction of the project. He also noted the suggestion to provide an interpreter for future meetings.
Mr Bheki Ngcobo	Mr Ngcobo inquired about the expected start date for employment opportunities.	Mr Ovens explained that the commencement of the project is dependent upon the approval of the application by the DMRE, which is expected by the end of next year.
Mr Thuso Buthelezi	Mr Buthelezi inquired whether the locations of the libraries displaying the project posters would benefit from the project, as Ward 99, where the project is situated, has not previously benefited from Ergo projects in their area.	Ms Mngwengwe explained that, in accordance with NEMA regulations, all communities that are directly and indirectly affected by the project must be informed.
Mr Jabulani Shongwe	Mr Shongwe inquired about how the community would benefit from such projects.	Ms Mngwengwe stated that the community could benefit from opportunities such as employment, bursaries, learnerships, skills transfer, and other similar initiatives.
Ms Lindiwe Mtshabe	Ms Mtshabe inquired about how the community could own shares in the project.	Mr Tshisevhe stated that the DRDGOLD's shares are available on the stock exchange, similar to other companies, and the public can purchase them. However, he mentioned that he would consult with management regarding potential opportunities for the community.
Mr Dumisani Mjani	Mr Mjani inquired about the expected start date of the project and the role of Ergo in fast-tracking its progress.	Mr Tshisevhe stated that the project could only commence once Ergo receives the Environmental Authorisation and Water Use Licence. Ms Mngwengwe added that the Environmental Impact Assessment (EIA) process is expected to be completed by July 2025.

© 2024 Kongiwe Environmental (Pty) Ltd

STAKEHOLDER	COMMENT	RESPONSE
Ms Phindi Mananga	Ms Mananga inquired whether training would be provided for unskilled workers once the project is successfully underway.	Mr Tshisevhe explained that training is provided for all employees before they commence work on the project.
Mr Sibongile Dala	Mr Dala inquired about how dust would be managed, as the project has the potential to generate significant dust.	Mr Tshamano explained that dust suppression measures would be implemented. He further clarified that vegetation would be planted along the Tailings Storage Facility (TSF) every 10 metres to help mitigate dust.
Ms Khosi Malaka	Ms Malaka suggested that the next open day be held at Galesdale, Ward 85, and Ward 112, as these areas are directly impacted by the project. She highlighted that people in these areas are currently suffering from health issues such as asthma, sight complications, and other dust-related problems.	Mr Mphete explained the proper procedure to follow if a community member's health is affected by the tailings dam operation. He also outlined some of the mitigation measures currently being implemented to minimize the project's impact on the community. ***Post meeting note: The TSF is located in Ward 99, with Ward 112 being directly adjacent to the project site. Ward 85 is located further away from the site The current venue is in close proximity to both wards 112 and 85.***
Ms Constance Mahlalela	Ms Mahlalela inquired about how Ergo can empower small businesses and whether the company could hire equipment, such as compressors, from her business.	***Post meeting note: Ergo have a procurement process in place. The primary contractor appointed through a tender process must ensure that employment opportunities are advertised locally giving surrounding communities the opportunity to apply.***

© 2024 Kongiwe Environmental (Pty) Ltd

Appendix A – Attendance Register

© 2024 Kongiwe Environmental (Pty) Ltd

Appendix B – Posters

Directly Affected Farm Portion			
MAP ID	Parent Farm	Farm Portion	Landowner
1	WITHOK 131	77	Ergo Mining Pty Ltd
		78	
		79	
		80	
	VLAKFONTEIN 161	15	
		20	
		14	
	ROOIKRAAL 156 IR	11	

Indirectly Affected Farm Portion			
MAP ID	Parent Farm	Farm Portion	Landowner
1	ROOIKRAAL 156 IR	10	Ergo Mining Pty Ltd
		16	
		RE/156	
	WITHOK 131	76	
		1/397	
	GLENROY 132	RE/132	
2	WITKLIP 172	10	Department of Public Works and Infrastructure (DPWI)
	GLENROY 155 IR	1	
	WITHOK 131	375	
3	VLAKFONTEIN 161	5	City of Ekurhuleni Metropolitan Municipality
		8	
	WITHOK 131	376	
4	VLAKFONTEIN 161	12	Nkomo Prop CC
5	VLAKFONTEIN 161	18	Multi-Waste (Jet Park) (Pty)
6	WITHOK 131	RE/397	Mr Ronald Erol Hirschowitz
7	VLAKFONTEIN 161	9	Heidi & Tsakane Eiendomme Pty Ltd
8	WITHOK 131	398	Mr Willem Du Plessis

28°16'0"E
28°20'0"E
26°20'0"S
26°24'0"S
WITPOORTJE 117 IR
Ward No. 82
WITHOK 131 IR
Ekurhuleni
Ward No. 99
GLEN ROY 132 IR
Ward No. 45
VLAKPLAATS 138 IR
MAPLETON 135 IR
Gauteng
ROODEKRAAL 133 IR
Withok TSF Boundary
Ward No. 85
Ward No. 112
N3
Ward No. 64
GLENROY 155 IR
VLAKFONTEIN 161 IR
Ward No. 10
Sedibeng
735
KOPPIESKRAAL 157 IR
TAMBOEKIESFONTEIN 716 IR
Ward No. 62
RIETVALEI 172 IR
TAMBOEKIESFONTEIN 173 IR
UITKYK 159 IR
Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

KONGIWE

WITHOK
LAND TENURE

Legend

- Other Settlement
- National Road
- Provincial Boundaries
- Parent Farm
- Ward Boundary
- District Municipality
- TSF Boundary
- Return Water Dam
- Storm Water Diversion
- Directly Affected Portions
- Indirectly Affected Portions

0 0,5 1 2 3
Kilometres

Project Code: Withok Recommissoning Project
Client: Ergo Mining (Pty) Ltd
Drawn: Z Omar | Checked: B Thornton
© 2024 Kongiwe Environmental (Pty) Ltd
www.kongiwe.com | Date: 04 November 2024

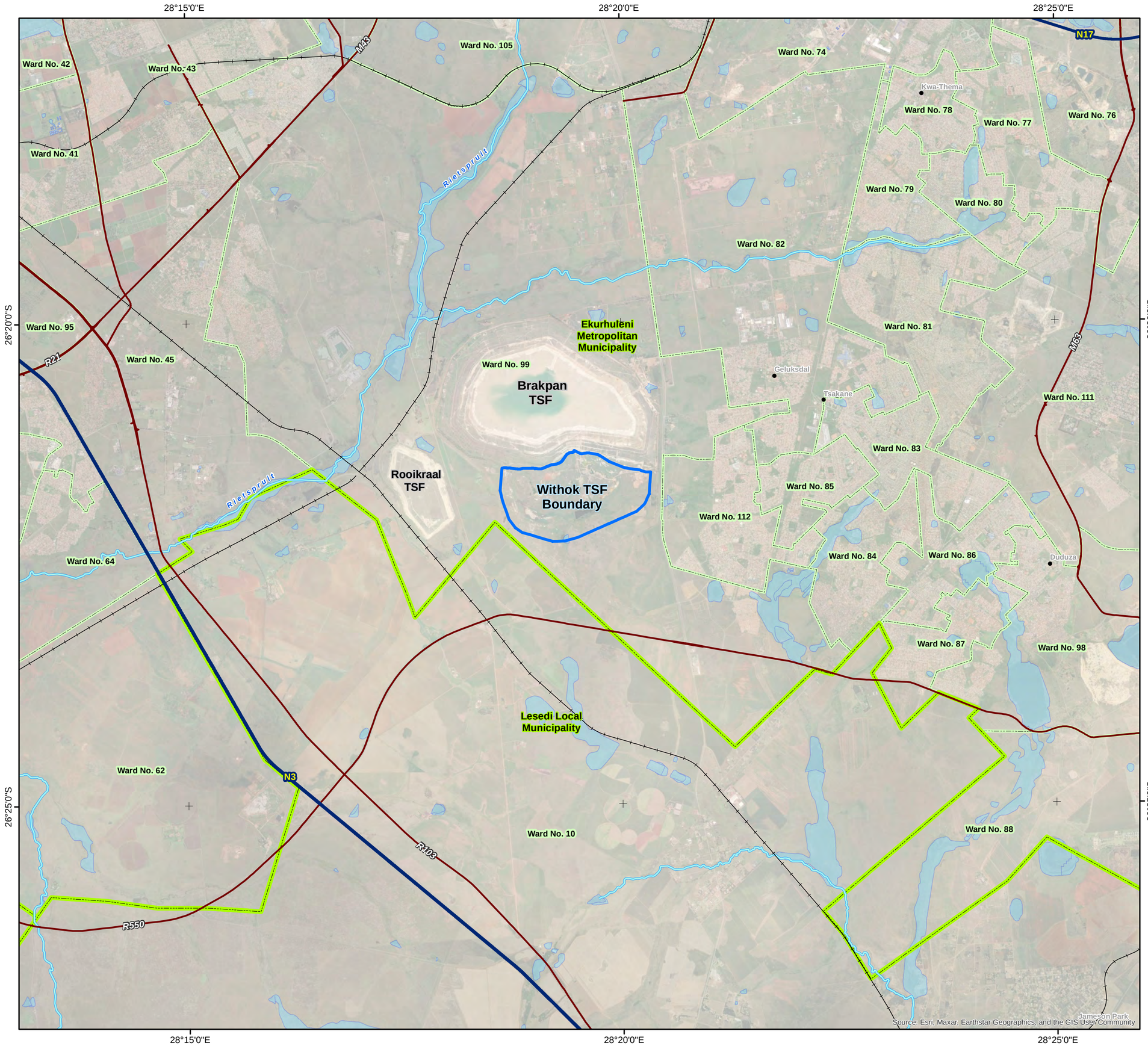
1:30 000

Coordinate System: WGS84 WGS84 TM LO29
Projection: Transverse Mercator
Datum: WGS 1984

(A2)
2024 Satellite Imagery

Disclaimer
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\Withok Land Tenure Landscape A3.mxd



KONGIWE

WITHOK RECOMMISIONING PROJECT

LOCAL ORIENTATION

Legend

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

0 0,5 1 2 3 4 5

Kilometres

Project Code: DRDG#012
Client: Ergo Mining (Pty) Ltd
Drawn: Z Omar | Checked: B Thornton
© 2024 Kongiwe Environmental (Pty) Ltd
www.kongiwe.com

1:50 000

Coordinate System: WGS84 TM LO29
Projection: Transverse Mercator
Datum: WGS 1984

(A2)
2024 Satellite Imagery

Disclaimer
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 1\Withok Site Infrastructure Landscape v2 A3.mxd

Environmental Authorization and Integrated Water Use Licence Application for the Recommissioning of the Withok Tailings Storage Facility, Ekurhuleni (TSF), Gauteng Province
Draft Scoping Report Findings

Proposed Project

Kongiwe Environmental (Pty) Ltd (Kongiwe) has been appointed by Ergo Mining (Pty) Limited, to undertake 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) located within the City of Ekurhuleni Metropolitan Municipality (CoE), Gauteng Province.

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

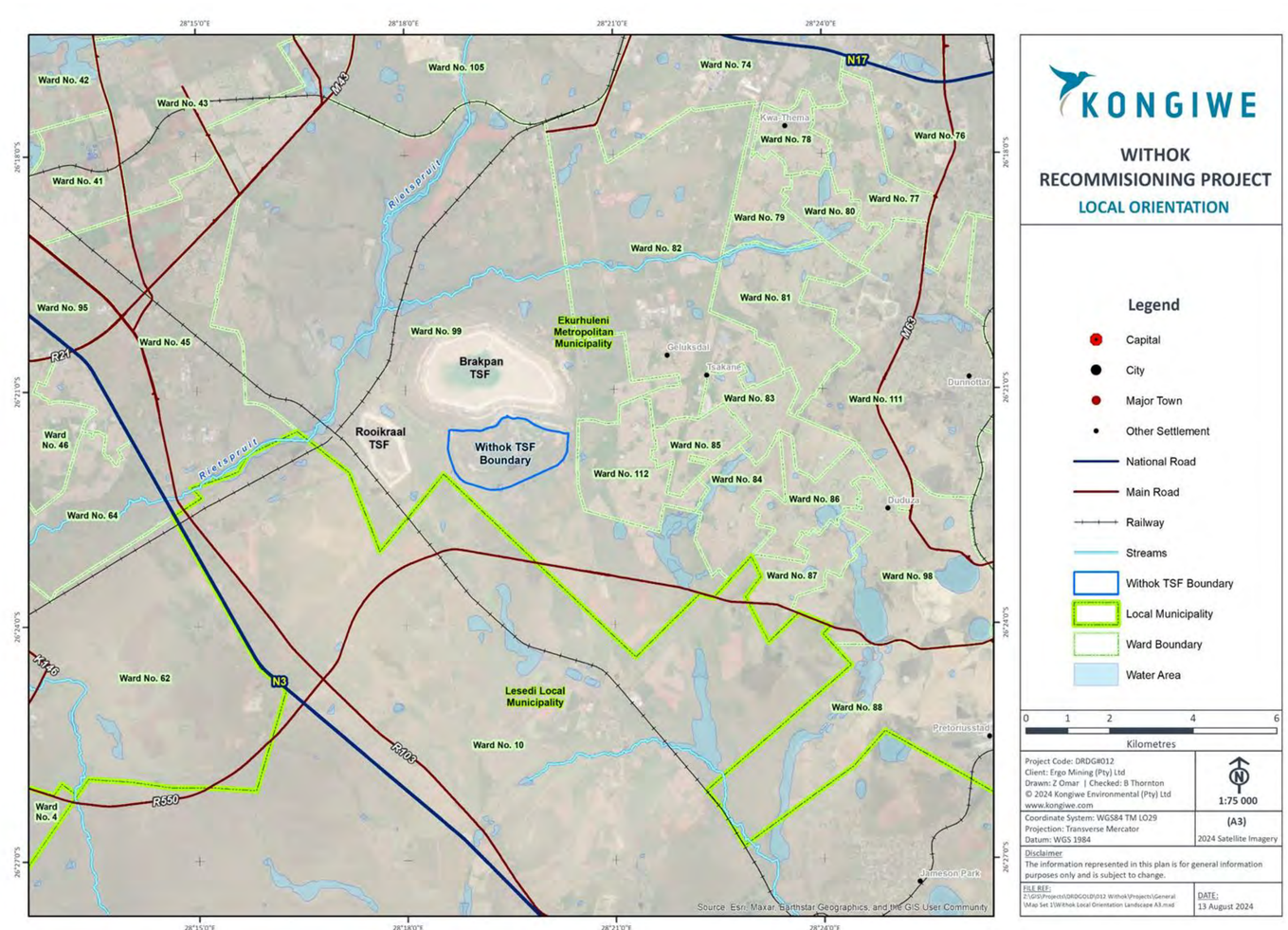
The intended recommissioning of the Withok TSF is to utilize similar methodology as previously deployed, i.e. cyclone deposition with a floating decant pumping system. However, the first phases (lower portion) of the development will be on a centreline basis to provide a much wider underflow prism, improving 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 Proposed Project is expected to take approximately 20 years, with an average estimated deposition rate of 1.3 million dry tons/month.

Project Background

Ergo Mining (Pty) Ltd, a subsidiary of DRDGOLD Limited (DRD), is reprocessing historical 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 will in the future reach its designed capacity and height and as such Ergo has identified the Withok TSF footprint as a potential future deposition site. The Withok TSF, situated adjacent and directly south of the Brakpan TSF, is a historic TSF footprint which has previously been reclaimed. Withok TSF is essential for the continued LOM of Ergo Mining. The increased deposition capacity created by Withok will allow Ergo Mining the opportunity to continue the reprocessing of numerous tailings facilities.



Key Findings of the Scoping Report

Environmental Component	Component Type	Potential Impact	Specialist Study Planned for EIA
Physical Environment (non-living)	Hydrology (including wetlands, surface water and groundwater)	❖ Potential for further acid mine drainage (AMD), increased heavy metal concentrations and increased sulphate concentrations in local surface water and groundwater if runoff from operations is not adequately managed through efficient storm water management structures. ❖ Pollution of the Rietspruit and further downstream in the event of TSF breach. ❖ Water and ground contamination due to pipeline leaks/spillages if adequate preventative measures are not implemented.	Surface Water Impact Assessment Groundwater Impact Assessment Wetland Impact Assessment
Biological Environment (living)	Ecology and Biodiversity (including fauna and flora)	❖ Disturbance of site and species of ecological importance in the event of a TSF beach. ❖ 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. ❖ Displacement of animal habitat due to the reinstatement of the TSF and, in the event of a TSF breach. ❖ Long-term improvement of ecosystem health and functioning of the project area following rehabilitation.	Biodiversity Impact Assessment
Cultural Environment	Heritage Resources	❖ Should heritage resources be present in the area, the reinstatement of the TSF might disturb them. A TSF breach could potentially also impact these.	Heritage Impact Assessment
Social and Economic Environment	Employment	❖ Continued employment and job security. ❖ Continued investment in local economy. ❖ Possible health and economic impacts downstream due to the recommissioning of the TSF or in the event of a TSF breach.	Socio-Economic Impact Assessment
	Land-use	❖ Land use impacts in the due to the recommissioning of the TSF or in the event of a TSF breach.	Socio-Economic Impact Assessment
	Air Quality	❖ Possible increase in dust levels as a results 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 Health Impact assessment

Environmental Authorization and Integrated Water Use Licence Application for the Recommissioning of the Withok Tailings Storage Facility, Ekurhuleni (TSF), Gauteng Province
Draft Scoping Report Findings

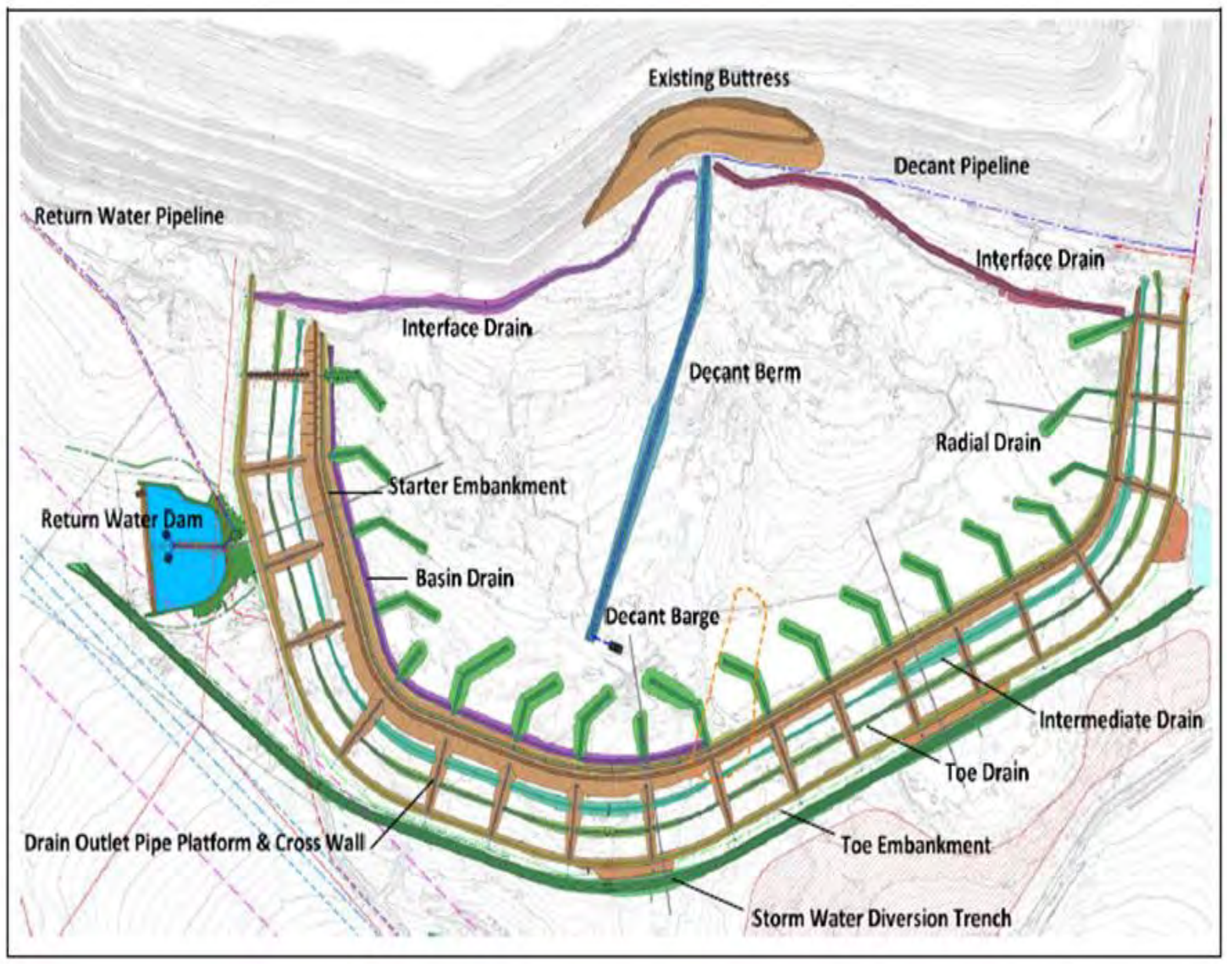
Tailings Storage Facility Design

DRDGOLD has implemented a Tailings Management Policy and a Tailings Storage Facility Management Standard. DRDGOLD is committed to comply with this policy, as well as to align itself with the Global Industry Standard on Tailings Management (GISTM) where appropriate.

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).

DRDGOLD 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.

GISTM: The GISTM requires that the consequence of failure classification for a TSF should be determined by assessing the downstream conditions documented in the knowledge base. The assessment and selection of the classification (GISTM Consequence Classification Matrix) shall be based on the dam breach assessment for the credible catastrophic failure modes.



Project Infrastructure

The following infrastructure will be utilised on site:

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

Environmental Authorization and Integrated Water Use Licence Application for the Recommissioning of the Withok Tailings Storage Facility, Ekurhuleni (TSF), Gauteng Province
Draft Scoping Report Findings

National Environmental Management Act and National Water Act

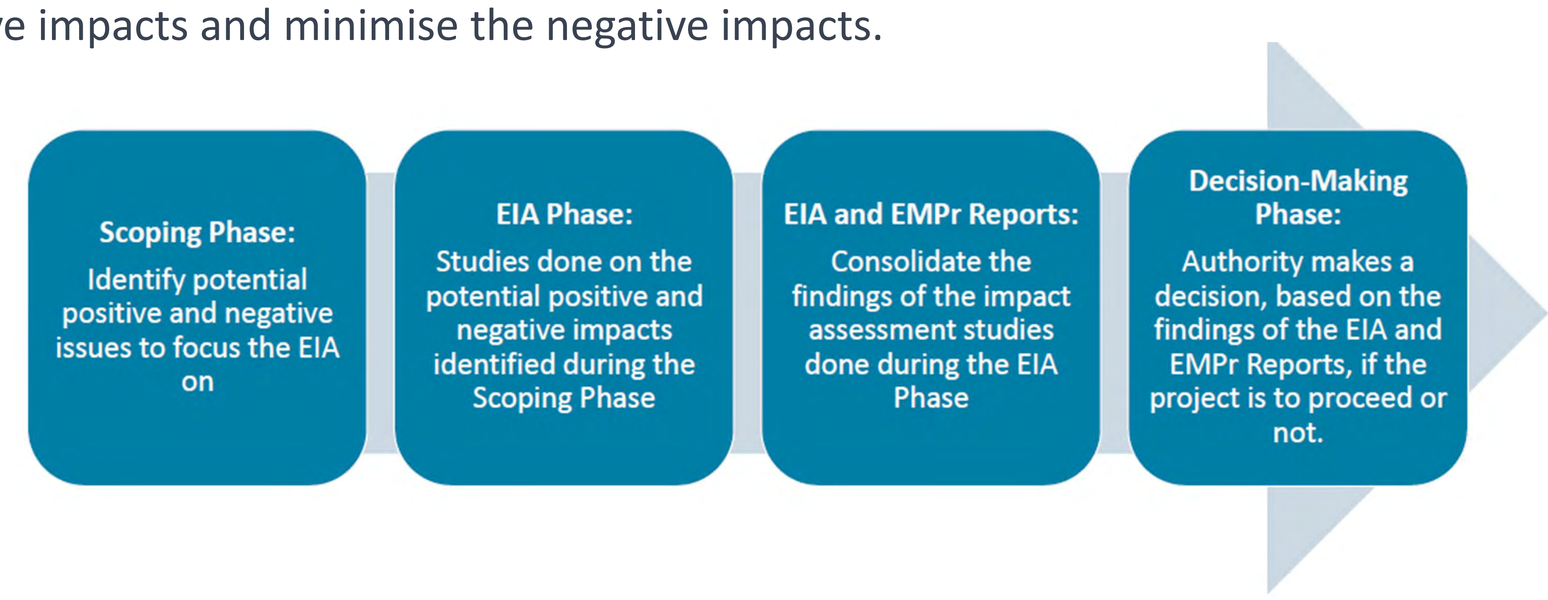
The proposed project requires and Environmental Authorisation (EA) in terms of the NEMA and NEM:WA and will follow a Scoping and Environmental Impact Assessment (S&EIA) process in terms of the EIA 2014 Regulations, as amended. The aforesaid Regulations enforce a strict timeframe and require a decision by the Competent Authority CA), the DMRE, within 300 days of the submission of the EA application.

The proposed project will require a Water Use Licence (WUL) in terms of the National Water Act, An Integrated Water Use Licence Application (IWULA) will be prepared and submitted in accordance with the Water Use Licence Application and Appeals Regulations 2017 and will be supported by a technical report and other supplementary information.

The Draft Scoping Report has been conducted to identify potential positive and negative impacts on the environment and to gather comments and queries from stakeholders. It documents the process followed, the finding's 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 the 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 minimise the negative impacts.



Listed Activities & Water Uses

- **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);
  - GN R983 – Activities 9, 10, 12, 13, 14, 19, 21D
  - GN R984 – Activities 6, 7
  - GN R985 – Activity 15
- **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).
  - Category B – 10
- **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.
  - Water uses 21 a, (c and i), g

Poster template by ResearchPosters.co.za

Environmental Authorization and Integrated Water Use Licence Application for the Recommissioning of the Withok Tailings Storage Facility, Ekurhuleni (TSF), Gauteng Province
Draft Scoping Report Findings

Public Participation Process

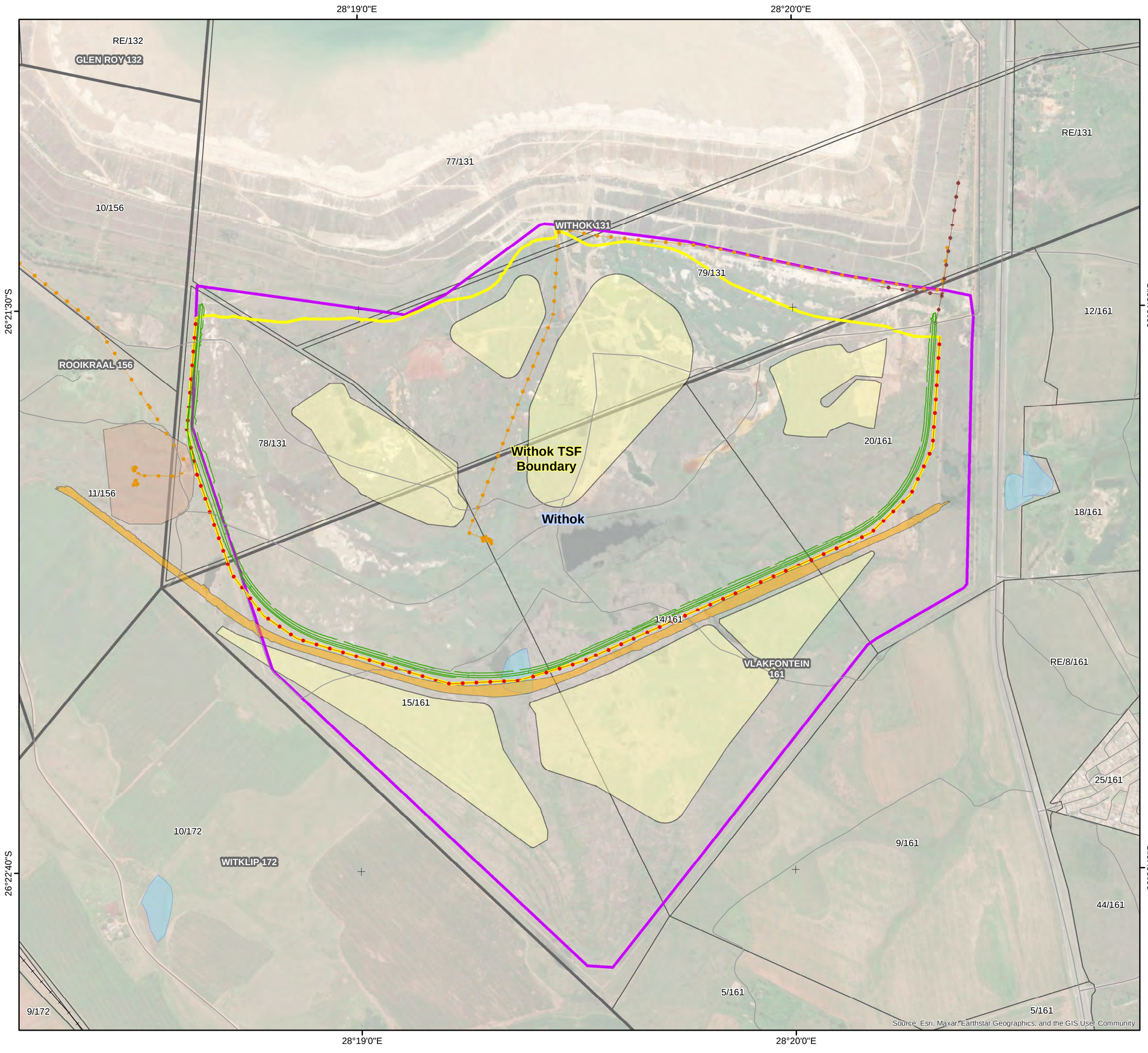
AVAILABILITY OF THE SCOPING REPORT FOR PUBLIC REVIEW AND COMMENT: The Draft Scoping Report (DSR) for the proposed project will be made available for public review and comment for a period of 30 days, from **Thursday, 24 October 2024 until Friday, 22 November 2024**.

Location	Physical Adress
Public Libraries with the Scoping Report	
Brakpan Public Library	Escombe St, Brakpan, 1541
Tsakane Public Library	3851 Xhosa St, Tsakane, Brakpan, 1548
Public Libraries with the non-technical summary	
Vosloruus 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	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, Mayerton, 1960
Online availability	
Kongiwe Environmental website	https://kongiwe.com/projects/
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: stakeholders@kongiwe.com should they require assistance with accessing the DSR/ have queries regarding the Proposed Project.	

The Way Forward

- **NEMA application submission:** Friday, 18 October 2024
- **Project Announcement**: Tuesday , 22 October 2024.
- **Public Participation Period**: Thursday, 24 October – Friday, 22 November 2024
- **Online Meetings:** 06 November 2024
- **Open Day:** Saturday, 09 November 2024 at Tsakane ext.22 Mega Primary School, 19732 Mashimin St &, Shiburi St, Tsakani, Brakpan, 1550
- **Final Scoping Report Submission**: Monday 02 December 2024

Poster template by ResearchPosters.co.za



KONGIWE

WITHOK RECOMMISIONING PROJECT

SITE INFRASTRUCTURE

Legend

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

0 100 200 400 600 800 1 000

Meters

Project Code: DRDG#012
Client: Ergo Mining (Pty) Ltd
Drawn: Z Omar | Checked: B Thornton
© 2024 Kongiwe Environmental (Pty) Ltd
www.kongiwe.com

1:10 000

Coordinate System: WGS84 TM LO29
Projection: Transverse Mercator
Datum: WGS 1984

(A2)
2024 Satellite Imagery

Disclaimer
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 1\Withok Site Infrastructure Landscape v2 A2.mxd

© 2024 Kongiwe Environmental (Pty) Ltd

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

DMRE reference number: GP158MR

DWS reference number: WU38174

Meeting Minutes: Federation for a Sustainable Environment

Date:	Thursday, 12 November 2024
Time:	14:00 – 15:00
Venue:	Microsoft Teams Online Meeting

List of attendees:

Organisation	Name of attendee	Designation
Federation for a Sustainable Environment (FSE)	Ms Mariette Liefferink	FSE, CEO
Ergo Mining (Pty) Ltd	Mr Masala Tshamano	Environmental Manager
Ergo	Mr Greg Ovens	Project Manager
Ergo	Mr Mothusi Mafatshe	Environmental Coordinator
Kongiwe Environmental (Pty) Ltd	Ms Gerlinde Wilreker	Project Manager/EAP
Kongiwe	Ms Anela Fixi	Environmental & Stakeholder Engagement Consultant
Kongiwe	Mr Bradly Thornton	Project Director
Kongiwe	Ms Vanessa Viljoen	Stakeholder Engagement Consultant
No apologies		
N/A		

Note: *These minutes are not intended as a verbatim transcript of the meeting, but rather as a summary of the salient discussions which took place.*

1. **Welcome and Introductions**
   - Ms Wilreker greeted the attendees and delivered her presentation.

2. **Meeting Agenda:**
   - Purpose of the Meeting
   - Important Notice
   - Introduction
   - Kongiwe's Role as an Independent Environmental Assessment Practitioner
   - Project Background
   - Project Location
   - History of the site
   - Current Status of the Site
   - Project Description: The Process
   - TSF Design
   - Technical Details

© 2024 Kongiwe Environmental (Pty) Ltd

- Project Infrastructure
- Specialist Studies
- Listed Activities & Water Uses
- Legislative Framework
- Document Availability
- The Way Forward
- Questions & Answers Questions and Answers

© 2024 Kongiwe Environmental (Pty) Ltd

3. Discussion

STAKEHOLDER	COMMENT	RESPONSE
Ms Mariette Liefferink, CEO, FSE	Ms Liefferink requested a definition of the term *'self-rehabilitation'* as it relates to the Withok TSF footprint over the past decade, as mentioned in the draft scoping report. She further stated that she does not consider 'self-rehabilitated' to be the appropriate term, as the area is a brownfield—a disturbed site.	Ms Ovens stated that, in terms of the definition of rehabilitation, it may not align perfectly, but over the course of 10 years, established grasses and naturally occurring vegetation did re-establish themselves on the site.
Ms Mariette Liefferink	Ms Liefferink inquired about the future land use of the remaining 150 hectares, noting that while the proposed TSF will cover 400 hectares, the original TSF footprint was 550 hectares, leaving 150 hectares unaccounted for.	Mr Ovens explained that, in terms of future land use, the area is still zoned for mining. The proposed area falls within the enclosed and fenced tailings dam footprint. He further clarified that, as per the current application, the plan is to use borrow pits from the remaining 150 ha to obtain material for the future rehabilitation of the side slopes of the TSF. Once the soil and cladding material are extracted, the borrow pits will be shaped and rehabilitated. However, he pointed out that the area will always remain within the mining footprint. Additionally, he noted that the area is part of the buffer zone, which is used for operational purposes, so there are no plans to develop it. It will continue to serve as a mining area.
Ms Mariette Liefferink	Ms Liefferink noted that the TSF design will follow a centreline approach, which is a compromise between upstream and downstream design, which is considered suitable for areas with moderate rainfall and moderate to high seismic risks, and more stable than upstream dams in	Mr Ovens stated that he is not qualified to answer that question but assured that the comment would be noted, and the tailings dam engineer would respond accordingly.

© 2024 Kongiwe Environmental (Pty) Ltd

STAKEHOLDER	COMMENT	RESPONSE
	an earthquake. However, she raised a concern based on her research that centre line TSFs usually have an impervious core which is supported by a localized zone of compacted tailings and an internal drain or filter. Placing rockfill next to the core zone (core support) is considered not suitable. It may lead to high hydraulic gradients through the core zone. She asked whether Ergo plans to mitigate this risk by preventing rockfill near the core.	
Ms Mariette Liefferink	Ms Liefferink asked that, since the TSF will be designed for the full life cycle of Ergo's operations, she assumes this would include closure and post-closure. She requested clarification on the post-closure monitoring period, asking whether it would be five years or if a different time frame is planned.	Mr Ovens stated that the post-closure monitoring period has not yet been determined, but it will be part of the ongoing Environmental Impact Assessment (EIA) study. This study will assess factors such as the water balance and the long-term management of the area. The necessary studies are still in progress.
Ms Mariette Liefferink	Ms Liefferink commented on the recommendation in the report to thicken and filter the tailings, which would help remove excess water and reduce the risk of catastrophic failure. She then raised a question about the concurrent rehabilitation of the side slopes of the Withok TSF, specifically regarding the soil taken from the borrow pits for cladding. She asked whether the soil to be recovered from the borrow pits will be topsoil and whether the vegetation planned for the area will be indigenous.	Mr Ovens explained that the material will be a mixture of topsoil, cladding, and rock. He noted that a blend is necessary, as using only topsoil on the side slopes would result in erosion from rainfall. Regarding the vegetation, he confirmed that an indigenous grass mix will be used.
Ms Mariette Liefferink	Ms Liefferink raised a concern regarding the drainage from the Tsakane township, which is collected in the attenuation	Mr Ovens explained that the attenuation dam is part of the clean water diversion system around the Withok TSF. Any

© 2024 Kongiwe Environmental (Pty) Ltd

STAKEHOLDER	COMMENT	RESPONSE
	dam. She noted that the report mentions an upgrade to the attenuation dam wall and asked whether the evaporation paddocks would include sewage from the Tsakane township, stormwater drainage, and stormwater runoff from the TSF.	water falling on top of the tailings dam is considered "dirty" water and would be directed to the evaporation paddocks at the base of the TSF, which ultimately drain into the return water dam. He clarified that water from the Tsakane Township, including stormwater and sewage, is managed separately by a different dam (the attenuation dam) located on the eastern side of the TSF, and away from it. The attenuation dam wall is being upgraded to accommodate future climatic events, such as large rainstorms, to prevent clean surface stormwater from impacting the side of the tailings dam. This upgrade involves creating a large trench within the fenced area of the Withok TSF to safely channel stormwater, ensuring that it does not mix with the dirty water from the TSF. The previous system, which used two pipelines, was deemed inadequate for handling large future events. Mr Ovens noted that this diversion will result in the loss of 150 hectares for the mine, as the trench must run along the southern boundary of the TSF.
Ms Mariette Liefferink, CEO, FSE	Ms Liefferink assumed that, like the Brakpan TSF, the Withok TSF will remain in perpetuity as there won't be any reclamation opportunities in the future. She then asked whether the HDPE liner will withstand the test of time, as she doubts it will last for 100 years or more, but she is	Mr Ovens explained that they have technical information on the proposed HDPE liner and its expected lifespan. He noted that factors such as UV exposure are considered, but the liner will be covered, which complicates the ability to predict its exact lifespan. He acknowledged that no one could provide a

© 2024 Kongiwe Environmental (Pty) Ltd

STAKEHOLDER	COMMENT	RESPONSE
	uncertain about what alternative options might be available.	definitive answer on how long it would last but emphasized that they are following the prescribed regulations for waste norms and standards, which guide Ergo's approach. He also mentioned that the scoping report details water monitoring plans, including boreholes to detect any issues. If any problems are identified, remediation measures, such as pollution control boreholes, will be implemented as necessary.
Ms Mariette Liefferink, CEO, FSE	Ms Liefferink acknowledged that the question of the HDPE liner's longevity is a complex and important one, noting that many people may assume it will stand the test of time indefinitely, which is not the case. She then raised a concern about the reliance on evaporation paddocks for water management, suggesting that focusing solely on evaporation rather than reuse and recycling might not align with the rapid growth of ESG investment funds, which are driving innovations in water use and mine water management practices. She further asked whether the water in the evaporation paddocks would be used solely for evaporation, or if it would also be recycled or reused, particularly in hydraulic mining operations.	Mr Ovens confirmed that recycling and reuse would indeed be part of the process. He further explained that the primary purpose of the evaporation paddocks is for the attenuation of stormwater runoff from the side slopes of the tailings dam. Water flows from the stormwater runoff into the paddocks, and from there, it moves sequentially from one paddock to the next until it ultimately reports to the return water dam. From the return water dam, the water is then pumped to Ergo Plant for re-use in Ergo's processes.

© 2024 Kongiwe Environmental (Pty) Ltd

STAKEHOLDER	COMMENT	RESPONSE
Ms Mariette Liefferink, CEO, FSE	Ms Liefferink asked Mr Ovens to provide this information in writing for her to review, as she had additional comments regarding the evaporation paddocks.	Mr Ovens explained that the ultimate purpose of the evaporation paddocks is to capture any water that falls on the TSF and direct it to the return water dams in one continuous flow. If not properly managed, there is a risk of the dams overtopping. Mr Tshamano clarified that the term "evaporation paddocks" may be misleading. He explained that these are simply containment paddocks, structures designed to capture and contain water running from the slopes to the bottom of the tailings. The water is then directed from the paddocks to the collector pipes and ultimately to the return water dam. The primary purpose is not evaporation, but to manage and contain the immediate runoff.
Ms Mariette Liefferink, CEO, FSE	Ms Liefferink expressed some confusion, stating that, based on her understanding of the report, the dirty stormwater from the side slopes is either reused in the system or, if not, is directed to the catchment paddocks where it evaporates. She quoted directly from the report, which states that the dirty water, if not reused, is attenuated in the paddocks and allowed to evaporate. She clarified that in this context, "evaporates" implies that the water is not reused or treated, but simply left to evaporate.	Mr Ovens acknowledged Ms Liefferink's point and stated that they would revisit the wording in the report to provide further clarification. He confirmed that the intention, as explained by Mr Tshamano, is to direct the water to the return water dams. However, if the dams are at capacity, the water would be attenuated in the paddocks. He agreed that the current wording may require further explanation and assured that they would review it.

© 2024 Kongiwe Environmental (Pty) Ltd

STAKEHOLDER	COMMENT	RESPONSE
Ms Mariette Liefferink, CEO, FSE	Ms Liefferink pointed out that the report mentions the disposal of excess unusable water, which could range from brine (saltwater) to solutions containing metals, minerals, and inorganic compounds that are unsuitable for use by people, animals, or plants. She then asked where this excess or unusable water would be disposed of, given that it is unfit for any use. Additionally, she inquired whether Ergo intends to recover any of the minerals or metals from this unusable water.	Mr Tshamano clarified that they are not applying to discharge or dispose of any water within the facility. The intention is to cycle and reuse the water wherever possible. ***Post meeting note: This section deals with post-closure. Drain water would be treated to discharge quality and released into the receiving environment. The brine from the treatment process would be pumped to the top surface where it will be evaporated.***
Ms Mariette Liefferink, CEO, FSE	Ms Liefferink stated that she would review the report again and refer to the relevant sections. She suggested that if her understanding is correct, those sections may need to be amended or revised. However, she acknowledged that she may be mistaken, as she is not qualified to comment on these technical aspects. She then asked whether the evaporation paddocks (or containment paddocks) would be lined facilities.	Mr Tshamano confirmed that the paddocks will be within the footprint of the facility and, therefore, they will be lined.
Ms Mariette Liefferink, CEO, FSE	Ms Liefferink noted that, similar to the return water, the brine from the treatment process is mentioned in the report. She expressed uncertainty about the treatment process, as brine is typically produced through reverse osmosis. The report indicates that the brine will be pumped to the top surface of the TSF and evaporated. She asked if this refers to the pool on top of the TSF and whether that pool will also contain the brine.	Mr Ovens added that the proposed closure plan for the facility includes stopping deposition, after which the water from the solution trenches will be treated and then discharged. However, the brine will be pumped back onto the top paddocks of the facility. He further stated that this is the current closure design, which will remain in place until there is no more dirty water emanating from the site.

© 2024 Kongiwe Environmental (Pty) Ltd

STAKEHOLDER	COMMENT	RESPONSE
Ms Mariette Liefferink, CEO, FSE	Ms Liefferink acknowledged that the brine would contain high salinity and possibly metals. She then referenced a point in the report that mentions the operating infrastructure being repurposed at closure to meet post-closure requirements. She raised a concern regarding the MPRD regulations, noting that the future land use or closure plan must be determined from the commencement of mining. This is necessary so that it can inform the closure and future land use objectives going forward.	The project team noted the Ms Liefferink's point.
Ms Mariette Liefferink, CEO, FSE	Ms Liefferink inquired about the future land use or post closure land use.	Mr Ovens responded, explaining that, based on the current information, they do not believe the tailings dams will be reclaimed. The focus will be on vegetation of the side slopes. He suggested that the proposed post-closure land use would likely be wilderness. Mr Tshamano added that the goal is to mimic the topography of the surrounding area. The remaining concerns after closure would primarily involve managing the water aspect and groundwater.
Ms Mariette Liefferink, CEO, FSE	Ms Liefferink acknowledged that the tailings storage facility cannot be repurposed for residential development. However, she emphasized that, according to the MPRDA Regulations, the future land use must align with the principles of sustainable development. She noted that	Mr Ovens acknowledged Ms Liefferink's point, noting that while he understood her concern, Ergo is currently conducting specialist studies in this area. He highlighted that Ergo is exploring biodiversity offset programs and mentioned that wild animals have already been released on the Brakpan tailings facility, with ongoing monitoring of how the facility is

© 2024 Kongiwe Environmental (Pty) Ltd

STAKEHOLDER	COMMENT	RESPONSE
	wilderness status may not qualify as a sustainable land use but added that this could be a discussion for another time.	supporting these animals. He further emphasized that Ergo is proactively working on this issue, with specialists studying and measuring the biodiversity impact, particularly in relation to the ongoing vegetation and rehabilitation efforts at the tailings site
Ms Mariette Liefferink, CEO, FSE	Ms Liefferink acknowledged the validity of Mr Ovens' comment regarding biodiversity and sustainability, referencing GISTM standards and ICMM objectives, which aim for zero biodiversity loss and a net gain. She suggested this could be a useful framework for post-closure land use planning. She then returned to her concern about the evaporation ponds, quoting from the report that they present risks to receptors, including land, water, wildlife, and community health and safety. The report also mentions that breaches in the embankment of the evaporation ponds could lead to seepage and contamination. She proposed considering alternatives to evaporation ponds, such as mist cannons, mechanical evaporation, thermal brine concentrators, or crystallization plants, as suggested by Professor Jannie Maree. She acknowledged the complexity of the issue, she expressed a desire to re-read the relevant sections of the report for a better understanding.	Mr Ovens acknowledged that, as the project is still in the scoping phase, they accept all comments and will reassess the concerns raised. He noted that these points would also be considered in the context of the relevant specialist studies moving forward.
Ms Mariette Liefferink, CEO, FSE	Ms Liefferink raised a concern regarding the risk of acid mine drainage, noting that the long-term management and associated costs are difficult to assess, as mentioned in the	Mr Ovens explained that Kongiwe has been tasked with undertaking the financial provision calculation as part of the Environmental Impact Assessment. He noted that they would

© 2024 Kongiwe Environmental (Pty) Ltd

STAKEHOLDER	COMMENT	RESPONSE
	report. She inquired how the financial provisions for the pumping and treatment of extraneous water would be determined in accordance with the Financial Provision Regulations. She emphasized that these provisions must account for the ongoing management, including latent and residual impacts.	use detailed groundwater reports in this process, but he clarified that he did not want to speak on their behalf regarding the specifics of the calculations. Kongiwe team confirmed that they are currently working on the calculations for the financial provisions, which will be incorporated into Ergo's broader financial provision. This will be managed and kept with the DMR (Department of Mineral Resources).
Ms Mariette Liefferink, CEO, FSE	Ms Liefferink raised concerns regarding the proposed Withok TSF, referencing the scoping report which mentions that the project overlaps with priority focus areas and protected areas, specifically the Avalon Private Nature Reserve, located one kilometre from the TSF. While the report states that the project does not overlap with threatened ecosystems, it does mention overlap with a non-priority NFEPA wetland and that the site falls within the grassland biome, with three species of conservation concern. The report also notes that the wetland and grassland habitats are in a relatively natural condition. Ms Liefferink inquired whether the intention is to maintain this natural condition during both construction and deposition. She further referred to page 130 of the scoping report, where it mentions a dolomitic aquifer, which raised	Mr Ovens responded that, as part of the approval process for the project, approval is required from the Council of Geoscience, particularly regarding the protection of the dolomitic aquifer. He explained that a detailed geotechnical study has been conducted, including recommendations on how to proceed on dolomitic land. This forms part of the ongoing design process and the Environmental Impact Assessment, which includes specialist studies. Mr Ovens acknowledged Ms Liefferink's comment and confirmed it has been noted.

© 2024 Kongiwe Environmental (Pty) Ltd

STAKEHOLDER	COMMENT	RESPONSE
	concerns due to dolomite being a porous rock. The report indicates that groundwater from the top of the TSF will drain radially, potentially impacting underlying aquifers. Ms Liefferink asked what precautionary measures are in place to ensure that the dolomitic aquifers, which typically contain high-quality water, are not adversely affected.	
Ms Mariette Liefferink, CEO, FSE	Ms Liefferink raised a concern regarding the groundwater monitoring data presented in the report, noting that it only covers three dates: November 2017, January 2018, and October 2018, making the data incomplete. She pointed out that, for these three dates, the sulphate levels exceed the resource quality objectives of 600 milligrams per litre, ranging between 1,043 and 1,213 milligrams per litre. Additionally, she highlighted that there is no data available for other metals. Ms Liefferink suggested that the data should be more comprehensive, as the limited data set makes it difficult to assess the full environmental impact accurately.	Ms Wilreker indicated that the impact assessment and mitigation measures will be updated during the EIA phase. She noted that extensive groundwater modelling and testing are currently underway, and the results will be presented as part of the process.
Ms Mariette Liefferink, CEO, FSE	Ms Liefferink raised concerns regarding the groundwater quality near the Withok and Brakpan TSFs, noting elevated sulphide levels but reassuringly pointing out that uranium concentrations in the East Rand are the lowest in the Witwatersrand goldfield, suggesting that uranium is not a major issue. She also addressed the health risks associated with particulate matter, referencing the scoping report's	Ms Wilreker responded to the question on cumulative impacts, confirming that the air quality impact assessment includes the cumulative effects of both the Brakpan and Withok TSFs. She explained that they are modelling different scenarios, such as Withok being halfway built and Brakpan fully rehabilitated, and that they are considering various

© 2024 Kongiwe Environmental (Pty) Ltd

STAKEHOLDER	COMMENT	RESPONSE
	mention of both short- and long-term exposure to dust, particularly in the Highveld priority area. She pointed out that dust fallout is often averaged over a month, potentially underreporting spikes in dust levels on specific days, and requested more detailed data on $PM_{2.5}$ and PM_{10} concentrations. She emphasized the importance of health assessments to address these risks. She then asked if, as mentioned in the scoping report, the assessment of cumulative impacts would include not only the Withok TSF but also other minor residue deposits in the vicinity	scenarios for both PM_{10} and $PM_{2.5}$ concentrations in their analysis.
Ms Mariette Liefferink, CEO, FSE	Ms Liefferink inquired whether any responses had been received regarding land claims in the area, noting that the land test indicated there were no land claims.	Mr Tshamano clarified that, contrary to the previous answer, they had received information from the competent authority regarding land claims. He noted that two land claims had been identified, and they were currently under internal review before responding further. ***Post meeting note: Ms Edith Mokgoko from DALRRD, clarified that the letter references a challenge to the Amendment Act of 2014 and states that the land claims are considered invalid in view of the finding of the Constitutional Court. As a result, the claims were not investigated further to confirm their validity. The claimants listed in the letter are being kept on record until Parliament passes new legislation that allows for the re-opening of land claim submissions.***

© 2024 Kongiwe Environmental (Pty) Ltd

STAKEHOLDER	COMMENT	RESPONSE
Ms Mariette Liefferink, CEO, FSE	Ms Liefferink acknowledged the applicant's adherence to the GISTM standards, noting that this was a positive aspect. She then referred to the GDARD 2011 Feasibility Study on Reclamation of Mine Residue Areas for Development Purposes: Strategy and Implementation Plan, which outlines that mine residue deposits include not only TSFs but also other areas such as waste rock dumps, quarries, water storage facilities, return water dams, and areas impacted by tailings spillage, among others. She inquired whether the rehabilitation objectives would encompass all these mine residue deposits within the mining right area if any of these exist within the mining right footprint, as per the requirements of the strategy.	Mr Ovens stated that the Ergo has a responsibility, under its mining rights, to close the site in accordance with the MPRDA Requirements.
Ms Mariette Liefferink, CEO, FSE	Ms Liefferink concluded by expressing her gratitude, thanking the project team for their patience and for the courteous responses provided throughout the discussion.	Ms Wilreker acknowledged Ms Liefferink's comments, expressing appreciation for her detailed feedback and noting that her input is always valuable to the team.

4. Closing

COMMENT	RESPONSE
Ms Wilreker thanked Ms Liefferink for her time and input.	Ms Liefferink thanked Ms Wilreker for the presentation.

The meeting adjourned at 15:00 pm.

© 2024 Kongiwe Environmental (Pty) Ltd

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

DMRE reference number: GP158MR

DWS reference number: WU38174

Meeting Minutes: KlipSA

Date:	Friday, 15 November 2024
Time:	10:30 – 11:30
Venue:	Kongiwe Environmental offices and Microsoft Teams Online Meeting

List of attendees:

Organisation	Name of attendee	Designation
KlipSA	Mr Andrew Barker	Town and Regional Planner
KlipSA	Mr Dennis Jane	Operations
University of Johannesburg (UJ)	Dr Kousar Banu Hoorzook	Programme Manager for UJ Process Energy Environment Technology Station
Ergo Mining (Pty) Ltd	Mr Mothusi Mafatshe	Environmental Coordinator
Ergo	Mr Masala Tshamano	Environmental Manager
Ergo	Mr Greg Ovens	Project Manager
Kongiwe Environmental (Pty) Ltd	Ms Gerlinde Wilreker	Project Manager/EAP
Kongiwe	Ms Anela Fixi	Environmental & Stakeholder Engagement Consultant
Kongiwe	Ms Vanessa Viljoen	Stakeholder Engagement Consultant
Kongiwe	Mr Bradly Thornton	Project Director
No apologies		
N/A		

Note: *These minutes are not intended as a verbatim transcript of the meeting, but rather as a summary of the salient discussions which took place.*

1. **Welcome and Introductions**
   - Ms Wilreker welcomed the attendees and delivered her presentation.

2. **Meeting Agenda:**
   - Project Background
   - Project Location
   - Stakeholder Meetings
   - Questions and Answers

Kongiwe Environmental made a presentation to the KlipSA stakeholders.

© 2024 Kongiwe Environmental (Pty) Ltd

3. Discussion

STAKEHOLDER	COMMENT	RESPONSE
Mr Andrew Barker, Town and Regional Planner, KlipSA	Mr Barker inquired about the future land use of the proposed site and suggested considering potential recreational opportunities. Specifically, he asked what could be developed on the site and what could be done with the facility once mining operations have concluded	Mr Ovens explained that the rehabilitation process, environmental impacts, and other related criteria are central to determining the final plans for the site. These factors are essential in shaping the proposed end-use and the overall closure strategy. He emphasized that the primary priority is to ensure the creation of a safe environment for the facility, which will guide the entire rehabilitation and site closure process.
Dr Kousar Banu Hoorzook, Programme Manager for UJ Process Energy Environment Technology Station, UJ	Dr Hoorzook suggested considering phytoremediation and artificial wetlands as long-term solutions during the scoping phase. She emphasized the importance of incorporating these approaches into the overall rehabilitation strategy.	The project team noted the suggestion
Dr Kousar Banu Hoorzook	Dr Hoorzook inquired about air quality monitoring in the long term, specifically asking if measures will be implemented to allow the community to monitor air quality over time. She expressed uncertainty about the current plans and requested clarification on what is being done in this regard for community monitoring.	Mr Ovens explained that Ergo works with an independent company called Skyside, which conducts dust fallout monitoring for Ergo's operations. He noted that this information is made publicly available through a quarterly forum, where community concerns can be raised and addressed. Mr Barker added that Professor Annegarn has been running dust monitoring for decades, starting in the 1980s when reclamation efforts began. He mentioned that Professor Annegarn has an extensive collection of records and oversees

© 2024 Kongiwe Environmental (Pty) Ltd

STAKEHOLDER	COMMENT	RESPONSE
		the quarterly meetings, and the consultants involved. Mr Barker emphasized that the monitoring and reporting process is thorough and occurs every few months.
Dr Kousar Banu Hoorzook	Dr Hoorzook inquired about the groundwater and surface water monitoring, specifically asking whether the testing will involve continuous monitoring or if it will be a one-time assessment during the scoping phase.	Mr Ovens clarified that groundwater and surface water monitoring is conducted monthly at the TSF complex. While most other sites typically monitor on a quarterly basis.
Dr Kousar Banu Hoorzook	Dr Hoorzook suggested that, at a later stage or during an appropriate phase, collaboration could occur with SMMEs that have developed prototypes with the CSIR to convert acid mine drainage water into potable water. She proposed discussing how this technology could be applied to water in surrounding communities, potentially converting it into drinkable water, if feasible.	Mr Ovens responded that, as an organization and as a country, such initiatives will be important for the future. However, he noted that there are regulatory hurdles to overcome, as a mine cannot sell water according to the current legislation. He mentioned that these regulations may evolve over time.

4. Closing

COMMENT	RESPONSE
Ms Wilreker thanked the KlipSA attendees for their time and input.	KlipSA attendees thanked Ms Wilreker for the presentation.

The meeting adjourned at 11:30 am.

© 2025 Kongiwe Environmental (Pty) Ltd

Appendix C9: Comments and Response Report

© 2024 Kongiwe Environmental (Pty) Ltd

Environmental Authorisation and Integrated Water Use Licence Application for the Recommissioning of the Withok Tailings Storage Facility (TSF), Ekurhuleni, Gauteng Province
DMRE reference number: GP 30/ 5/1/2/2 (158) MR
DWS reference number: WU38174

Table of Contents

1 Indirectly Affected Landowners 3
1.1 City of Ekurhuleni Metropolitan Municipality (CoE) 3
1.2 Department of Public Works and Infrastructure (DPWI) 12
1.3 Directly Affected Landowners within the Zone of Influence 13
2 Organs of the State 15
2.1 Department of Mineral Resources and Energy (DMRE) 15
2.2 Department of Water and Sanitation (DWS) 16
2.3 Department of Agriculture, Land Reform and Rural Development (DALRRD) 20
2.4 Department of Forestry, Fisheries and Environment (DFFE) 21
2.5 South African Heritage Resources Agency (SAHRA) 23
2.6 Eskom (National Transmission Company South Africa SOC Ltd (NTCSA) 25
2.7 Rand Water 30
2.8 Transnet 32
2.9 South African National Roads Agency (SANRAL) 33
2.10 Gauteng Department of Health (DoH) 34

© 2024 Kongiwe Environmental (Pty) Ltd

3 Environmental Non-Governmental Organisations (NGOs) 34
3.1 Federation for a Sustainable Environment (FSE) 34
3.2 KlipRiviersberg Sustainability Association (KlipSA) 48
3.3 Klipriver-Suikerboschrand Conservancy 51
3.4 Johannesburg Heritage Foundation 52
4 Forums 53
4.1 Klip River Forum 53
4.2 Blesbokspruit Forum 53
5 Key Stakeholders and Interested and Affected Parties (I&APs) 56
5.1 Interested and Affected Parties (I&APs) 56

© 2024 Kongiwe Environmental (Pty) Ltd

Comments and Responses Report: Final Scoping Report

1 Indirectly Affected Landowners

1.1 City of Ekurhuleni Metropolitan Municipality (CoE)

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
Mr Winston Marumo, Brakpan Area Manager, CoE	Microsoft Teams Online Meeting	Tuesday, 05 November 2024	Mr Marumo inquired about the location of the project property and whether the proposed site is owned by Ergo or if it is private land.	Ms Wilreker confirmed that the property where the activities are taking place is owned by Ergo. She also mentioned that they would provide Mr Marumo with the farm portion number of the property. ***Post meeting note*: *The Withok TSF area and proposed project infrastructure are 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,***	Section 2.1.1 of SR EIA – Section 1.8
Mr Winston Marumo, Brakpan Area Manager, CoE	Microsoft Teams Online Meeting	Tuesday, 05 November 2024	Mr Marumo stated that he would appreciate it if Kongiwe team could provide him with the stand number.	Mr Ovens provided the requested information in the meeting chat box.	Section 2.1.1 of SR
Ms Dudu Twala, Area Manager: Brakpan CCA: City Planning, CoE	Microsoft Teams Online Meeting	Tuesday, 05 November 2024	Ms Twala inquired about how Tsakane 23 relates to the project.	Ms Wilreker stated that Tsakane is located to the east of the project area and is a potentially affected zone. She mentioned that specialist studies are currently being conducted to assess how the project will impact Tsakane.	Section 2.1 of SR Figure 2-2 of SR EIA – Section 1.8

© 2024 Kongiwe Environmental (Pty) Ltd

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
Ms Neo Mphahlele, Acting regional manager for disaster management and Emergency, CoE	Microsoft Teams Online Meeting	Tuesday, 05 November 2024	Ms Mphahlele inquired about the level of involvement of their Environmental Resource Management team in the project. She also asked whether they had been invited to the meeting, noting that the project will have an impact on the environment. Additionally, she inquired whether this was the first meeting or if environmental management officers had been engaged in previous meetings, as she believes their input is critical for this discussion.	Ms Wilreker stated that the CoE environmental officers were invited to the meeting and are aware of it. She further confirmed that this is their first meeting with the CoE officials and that the project documents have been made available to them.	Appendix C6 of SR
Ms Lilian Matlala, Environmental Officer, CoE	Microsoft Teams Online Meeting	Tuesday, 05 November 2024	Ms Matlala confirmed that they are aware of the project, as the Environmental Assessment Practitioners (EAPs) for the CoE. She mentioned that they have been liaising with the Kongiwe EAPs handling the project and have received a copy of the scoping report. They will be submitting their comments as required.	The meeting attendees noted Ms Matlala's response.	N/A
Ms Dudu Twala, Area Manager: Brakpan CCA: City Planning, CoE	Microsoft Teams Online Meeting	Tuesday, 05 November 2024	Ms Matlala noted that Ms Wilreker had referred to the MSDF from the City of Johannesburg instead of the City of Ekurhuleni. She further clarified that the CoE has its own MSDF, which is responsible for the City of Ekurhuleni region.	Ms Wilreker explained that Ergo removes mining tailing facilities across both the City of Johannesburg (CoJ) and the City of Ekurhuleni (CoE), which is why both cities were included in the presentation. She further confirmed that for this project, the CoE MSDF is the applicable one.	Section 3 of SR EIA - Section 5

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
Mr Greg Ovens, Project Manager, Ergo Mine (Pty) Ltd	Microsoft Teams Online Meeting	Tuesday, 05 November 2024	Mr Ovens thanked Ms Twala for raising that point and advised the Kongiwe team to ensure that they consider the most up-to-date Special Development Framework available.	Ms Wilreker noted Mr Ovens' advice.	Section 3 of SR EIA - Section 5
Ms Lilian Matlala, Environmental Officer, CoE	Microsoft Teams Online Meeting	Tuesday, 05 November 2024	Ms Matlala inquired where the residue from the tailings dam would be transported.	Ms Wilreker clarified that Ergo is involved in multiple projects reclaiming TSFs, some of which are located in the City of Johannesburg and others in the City of Ekurhuleni. Currently, the material is processed at the Ergo plant outside Brakpan, after which the residual tailings are deposited into the Brakpan TSF, located south of Brakpan in City of Ekurhuleni.	Section 2.4 of SR
Ms Lilian Matlala, Environmental Officer, CoE	Microsoft Teams Online Meeting	Tuesday, 05 November 2024	Ms Matlala stated that she had identified some discrepancies between the CoJ and CoE, but they will include these in their comments so that Kongiwe can address them in the final scoping report.	Ms Wilreker noted Ms Matlala's comment. ***Post meeting note: Comments not received at the time of the finalisation of the Scoping Report***	Section 3 of SR EIA - Section 5
Ms Lilian Matlala, Environmental Officer, CoE	Microsoft Teams Online Meeting	Tuesday, 05 November 2024	Ms Matlala inquired about the water use licence, asking whether Kongiwe is processing the water use licence in parallel with this application.	Ms Wilreker confirmed that both applications are being processed in parallel, particularly with regard to public participation. She mentioned that they have submitted a pre-application meeting request, held a pre-application meeting, and conducted a site visit with the DWS officials. They are currently finalizing Phase 1 of the water use licence application.	Appendix C, Section 2.4.4 of SR

© 2024 Kongiwe Environmental (Pty) Ltd

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
Ms Gerlinde Wilreker, EAP, Kongiwe Environmental	Microsoft Teams Online Meeting	Tuesday, 05 November 2024	Ms Wilreker thanked the CoE officials for their comments and stated that they will share the presentation, and the minutes of the meeting once finalized. She also mentioned that they look forward to receiving the CoE's comments on the scoping report.	CoE noted the comment.	-
Mr Greg Ovens, Project Manager, Ergo Mine (Pty) Ltd	Microsoft Teams Online Meeting	Tuesday, 05 November 2024	Mr Ovens thanked the CoE attendees for availing themselves and providing valuable input. He further clarified that the project is still in its initial stages and requested the CoE officials to review the documents and engage with them, as their feedback will contribute to producing a better final product for the ultimate regulators.	CoE noted the comment.	-
Mr Martin Bekker, Spatial Planning Division	Email Correspondence	Tuesday, 05 November 2024	Dear Theo and Kobie The attached relates to our discussion with the Brakpan CCC-City Panning office in respect of the "super-dump" located to the west of Tsakane. From my brief initial scan of the attached document, the proposal essentially appears to involve the expansion of the "super-dump" (Brakpan TSF) to the south (onto Withok TSF).	Thank you for your email. To confirm, Ergo is planning on recommissioning the Withok TSF, situated directly south of the Brakpan TSF. Your interpretation is correct. The Withok TSF will be separate but abutting the existing Brakpan TSF. The project site is owned by Ergo and zoned for mining. The Gauteng Department of Agricultural and Rural Development (GDARD) developed a set of buffer zones to demarcate safe distances for development around mine residue areas in places where developments may	Section 3 of SR

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
			I think for purposes of the SDF revision, what is of significance to us is how it might affect the safety / buffer zones around the existing and expanded TSF-area. Dear Thuli Could you kindly advise on: - Whether my crude interpretation above is correct; - How it may influence the safety / buffer zones around the expanded TSF-area; - What the limitations are for development within the safety / buffer zones (i.e. threshold distances, types of uses allowable / not allowable).	result in harmful effects on human health and wellbeing. Two buffers were devised, namely a best-case scenario which denotes land within a 1000 m zone around mining waste and a worst-case scenario which denotes land within a 500 m zone around mining waste. We note from the 2014 SDF that the land area in which the project is situated is designated as mining. And the adjacent areas are proposed agriculture and open space (Screengrab below). We would recommend using the GDRARD buffer of 1000m for planning purposes. We trust this information is of assistance.	
Maggy Hadebe, Pr.Pln Metropolitan Spatial Planning Division City Planning Department	Email Correspondence	Wednesday, 06 November 2024	Dear Thuli I noticed that you mention a 2014 SDF in your email below. Is this a CoE SDF because we don't have a 2014 but a 2015 MSDF? Yesterday's presentation also made mention of the 2011	Good day Ms Hadebe My apologies for the confusion. You are correct, the reference should have been made to the 2015 MSDF. The reference to the 2011 MSDF is being corrected. Ergo are operating within CoJ and CoE,	Section 3 of SR EIA - Section 5

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
Ekurhuleni Metropolitan Municipality			MSDF as well as the CoJ SDF. Can you kindly explain how those fits into this process?	hence the reference to the CoJ was also made, but to prevent confusion, reference to the CoJ SDF is being removed.	
Maggy Hadebe, Pr.Pln Metropolitan Spatial Planning Division City Planning Department Ekurhuleni Metropolitan Municipality	Email Correspondence	Wednesday, 06 November 2024	Good day Thank you. Let us make reference to the recent and approved policies which are relevant to City of Ekurhuleni; to avoid confusions as well as to confirm correct source of information informing decisions to be made on this project.	Thank you Ms Hadebe. I confirm that it is the Ekurhuleni Metropolitan SDF from 2015. We will check the Scoping Report to make sure we are not referencing an invalid document.	Section 3 of SR EIA - Section 5
Mr Martin Bekker, Spatial Planning Division	Email Correspondence	Tuesday, 06 November 2024	Hi Thank you for the notification of this application. Thank you also for your brief presentation and introduction of the project at the Klip River Catchment Forum yesterday. I am unfortunately not able to attend your open day on Saturday 9 November and perhaps we could chat about this application when we meet.	Good day Andrew Thank you for your email. We have added you as an interested and affected party. The design and closure of the TSF has been considered in the design report, as has the GDRARD buffer of development around tailings facilities.	Appendix C3 – Presentation EIA – Section 3.6 Appendix C7 – closure and Rehabilitation Plan

© 2024 Kongiwe Environmental (Pty) Ltd

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
			One aspect that I would ask to be incorporated in the design of the tailing's facility is to consider the future use and management of the topographical and infrastructural features that are created for the future "beyond mining ". One of the challenges that we have in current time from the early legacy of mining, is trying to achieve effective and efficient land development interventions where mining infrastructure has been left behind. We obviously do not have perfect 20:20 future vision. However, we should at least consider what could be the nature of future use in the vicinity and on infrastructure left behind. Please register me as an IAP for this application.	We take note of your request, and it would be beneficial to have a meeting including Ergo to discuss this further. We would be happy to meet. Are you available for an online meeting?	
Mr Andile Daemane, Ward 99 Cllr, CoE	Microsoft Teams Online Meeting	Tuesday, 06 November 2024	Mr Daemane sought clarification on whether the specialists identified for the project might come up with different outcomes during the EIA stage that could potentially stop the project. He also requested further explanation on what the EIA stage entails.	Ms Wilreker explained that the Environmental Impact Assessment (EIA) is the second phase of the project. Currently, the project is at the scoping phase, which is the initial stage where the background of the study is being assessed and the project is being introduced to the public. During the EIA phase, specialist studies will be conducted to assess the potential impacts of the project. The specialists will present their findings, highlighting the identified impacts and how they can be	Section 10 of SR EIA – Section 8 and 9 Appendix D – Specialist Studies

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
				prevented or mitigated. The specialists will also determine whether the project poses too many risks to operate or if its impacts are not severe enough to prevent it from moving forward.	
Mr Andile Daemane, Ward 99 Cllr, CoE	Microsoft Teams Online Meeting	Tuesday, 06 November 2024	Mr Daemane inquired about the anticipated questions the community might have, noting that one of the key concerns on his mind is the health impact of the proposed project	Ms Wilreker explained that, from an environmental perspective, they anticipate concerns related to dust and air quality, and how these factors could affect health. She added that, from an economic standpoint, the community would likely be interested in understanding how they would benefit from the project. She noted that these are the types of questions commonly raised in community projects.	Section 10 of SR EIA – Section 9 Appendix D11 – Health Impact assessment
Mr Andile Daemane, Ward 99 Cllr, CoE	Microsoft Teams Online Meeting	Tuesday, 06 November 2024	Mr Daemane inquired about the response the Kongiwe team would provide if the community raised concerns regarding the impact of dust on their lives.	Ms Wilreker explained that specialists are conducting studies to determine the direction of dust dispersion and identify which areas will be most or least impacted. However, she clarified that the project is still in its initial stage and the exact details of the impact are not yet available. At this stage, the focus is on gathering and considering the community's concerns to ensure that the specialists address those concerns in their assessments.	Section 10 of SR EIA – Section 9 Appendix D4 – Air Quality Impact Assessment Appendix D11 – Health Impact assessment
Mr Andile Daemane, Ward 99 Cllr, CoE	Microsoft Teams Online Meeting	Tuesday, 06 November 2024	Mr Daemane inquired whether the specialists' research includes the economic aspects of the	Ms Wilreker stated that the economic aspects of the project will be addressed in the next phase.	Section 10 of SR

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
			project, how the communities will benefit and the potential impact of dust on their livestock.	However, she confirmed that the specialist Air Quality Assessment Report will include an assessment of the potential impact that dust might have on the community's livestock	EIA – Section 8.8 and 9 Appendix D4 – Air Quality Impact Assessment Appendix D6 – Socio-Economic Impact assessment
Mr Andile Daemane, Ward 99 Cllr, CoE	Microsoft Teams Online Meeting	Tuesday, 06 November 2024	Mr Daemane inquired about the anticipated duration of the proposed project.	Ms Wilreker stated that the project is anticipated to last for 20 years, or until the project site reaches its full capacity.	Section 5 of SR EIA – Section 2.5
Mr Tshisevhe Josiah, Community Liaison Officer, Ergo Mine (Pty) Ltd	Microsoft Teams Online Meeting	Tuesday, 06 November 2024	Mr Tshisevhe explained to the councillor the purpose of the project and outlined what the community should expect, highlighting the key benefits and outcomes for residents.	Mr Daemane thanked Mr Tshisevhe for the explanation and confirmed that all his concerns had been addressed.	-
Mr Andile Daemane, Ward 99 Cllr, CoE	Microsoft Teams Online Meeting	Tuesday, 06 November 2024	Mr Daemane inquired about the expected timeline for the project's commencement.	Ms Wilreker explained that the project is still in its initial stage. Once they receive authorization from the DMRE and DWS, the project may commence.	Section 1.5.2 of SR Section 1.5.3 of SR EIA – Section 2.3
Ms Gerlinde Wilreker, Project Manager, Kongiwe	Microsoft Teams Online Meeting	Tuesday, 06 November 2024	Ms Wilreker encouraged the councillor to send any further questions or comments that may arise during the course of the project in writing	Mr Daemane noted Ms Wilreker suggestion.	-

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
Environmental (Pty) Ltd			to stakeholders@kongiwe.com and assured that the Kongiwe team would respond accordingly.		

1.2 Department of Public Works and Infrastructure (DPWI)

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
Mr Zakhele Ndebele, Real Estate Management Services, DPWI	MS Teams Online Meeting	Thursday, 07 November 2024	Mr Ndebele expressed his gratitude to the Kongiwe team for informing his department about the project. He further stated that, at this stage, they do not have any significant comments but will thoroughly review the draft scoping report and provide their feedback in due course.	The project team welcomed Mr Ndebele's comment	-
Khumbulani Thobani, Town Planning Services	Email Correspondence	Thursday, 16 January 2025	Good day As per our telephone conversation (Anela Fixi), we have been looking at your application that was sent to us for comments and we need additional information with regards to the impact that the Tailings Storage Facility will potentially have on the environment, before concluding my investigation. As per your Memorandum there is a section that specifies that various specialist	Good day Mr Thobani Thank you for your email and request. Please note that we are still busy with the specialist studies. These, and the Draft EIA will be made available for public review during the EIA Public Consultation Phase.	Appendix D – Specialist Studies

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
			studies are being undertaken as part of the Scoping and Environmental Impact Assessment / IWULA process to assess the potential impacts associated with the proposed project. Can I have please have the studies for the following as per your memorandum: - Air Quality - Noise - Socio Economic Impact Assessment - Closure and rehabilitation - Visual - Health Biodiversity and Wetlands - Radiation - Surface Water - Ground Water	You will be notified when these are available. Please do not hesitate to contact us if you have any further queries.	

1.3 Directly Affected Landowners within the Zone of Influence

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
Ms Lee Bezuidenhout, Willow Brooke	Email Correspondence	Tuesday, 22 October 2024	Good afternoon	Good day,	-

© 2024 Kongiwe Environmental (Pty) Ltd

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
			I received telephonic call regarding this matter as well as the email below. I was also asked for the contact details of the neighbouring property which I sent through this morning to Thuli. Kindly note that this matter is NOT FOR OUR ATTENTION, we are not situated in Brakpan or Ekurhuleni but rather Midvaal District and that the contact and property details have incorrectly been sourced. Kindly contact the relevant owner/s of the properties affected by this and direct your email for their review. Regards.	Thank you for providing us with your neighbour's contact details. Ergo Mining intends aligning to the Global Industry Standard on Tailings Management (GISTM) where possible. As you are located downstream of the project area, and in alignment with the GISTM standard, you have also been invited to register as a potentially Interested and Affected party if you are interested.	
Mr Victor Nkosi, St Paul Anglican Member	Email Correspondence	Monday, 18 November 2024	Good day At the Church Street in Henley on Klip, the a is an EIA notice displayed. Unfortunately it is almost damaged for one to read. I am a member of the St Paul Anglican church and EIA is displayed just next to the church. One of our member just noticed this notice this past weekend, and a number of engagement sessions have already gone past. First, I will be glad if you can send us	Good day Mr. Nkosi Thank you for your email. Please find attached the background information document and the non-technical summary for the proposed Withok recommissioning project. We will add you as an interested and affected party to our database so that you can receive further communication with regards to the project.	-

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
			maybe through the email the original communications done on this regards so that we can also participate if necessary. Secondly, we appreciate your invites to the forthcoming sessions to keep ourselves abreast on developments in our area.		

2 Organs of the State

2.1 Department of Mineral Resources and Energy (DMRE)

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
Mr Chavalala, Regional Manager: Environmental Management	In-Person	Thursday, 05 September 2024	Mr Chavalala explained that the process to be followed is correct. There are no further comments on the project itself.	Kongiwe and Ergo noted the comment and thanked Mr Chavalala.	-
Mr Chavalala, Regional Manager: Environmental Management	In-Person	Thursday, 05 September 2024	Mr Chavalala indicated that an RoD will be required from the DWS for the Waste Management Licence. He further said that at present there are challenges in obtaining the RoDs from the DWS. This may delay the receipt of a decision on the EA from the DMRE.	The comment was noted.	-

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
Mr Chavalala, Regional Manager: Environmental Management	In-Person	Thursday, 05 September 2024	Mr Chavalala explained that Ergo will need to engage in depth with the DWS.	Mr Ovens indicated that a pre-application meeting and site visit will be held with DWS on 11 September 2024. This will be discussed further with them.	Appendix C - Section 2.4.4
Mr Chavalala, Regional Manager: Environmental Management	In-Person	Thursday, 05 September 2024	Kongiwe will notify the DMRE of the date when the application for the project will be submitted.	Mr Chavalala noted and thanked Ms Wilreker.	-

2.2 Department of Water and Sanitation (DWS)

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
DWS	In-Person	Wednesday, 11 September 2024	How will the stormwater from the Brakpn TSF be managed on the Withok footprint?	Drains will be installed as part of the Brakpan TSF to facilitate water drainage and enhance stability. Drainage will be collected through outlet pipes. The Withok TSF will buttress the Brakpan TSF, and ultimately, runoff from the Brakpan TSF will flow onto the Withok TSF. The water will be reused in Ergo's processes. During construction, water will be collected for construction purposes.	Section 2.4.1 of SR EIA – Section 3.3

© 2024 Kongiwe Environmental (Pty) Ltd

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
DWS	In-Person	Wednesday, 11 September 2024	What other depositions options are available?	The options include lowering the tonnage deposited onto Brakpan to extend its lifespan or sending material to the Daggafontein TSF while the authorization is being processed.	-
DWS	In-Person	Wednesday, 11 September 2024	What material will be used for the construction of the berms that will divert clean and dirty water?	The berms will be constructed from soil.	-
DWS	In-Person	Wednesday, 11 September 2024	Is the water being discharged dirty water?	No, it is stormwater from the Tsakane area that collects in the attenuation dam. The water is then channelled through pipelines that run beneath the Withok footprint.	Section 2.4.1 of SR EIA – Section 3.3
DWS	In-Person	Wednesday, 11 September 2024	Will there be an offset strategy for the wetlands?	Comment noted.	-
DWS	In-Person	Wednesday, 11 September 2024	What activities are currently taking place at the attenuation dam?	The dam wall is located on land owned by Ergo and is therefore considered Ergo property. It is used to control stormwater originating from Tsakane. Dam safety measures will be implemented.	Section 2.4.1 of SR EIA – Section 3.3
DWS	In-Person	Wednesday, 11 September 2024	Is there Dolomite on sit?	There is a pocket of dolomite in the southern section. A geotechnical study has been conducted to confirm this. Ergo has met with the Council of Geoscience to understand the requirements for approval.	Appendix D3 – Groundwater Imapct Assessment

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
DWS	In-Person	Wednesday, 11 September 2024	Will GN704 be applied for, and for which activities will it be utilized?	Yes, GN704 will be applied for all relevant activities.	IWWMP
DWS	In-Person	Wednesday, 11 September 2024	What studies are being covered? The presentation is focusing only on environmental studies.	In addition to the environmental studies, the following studies have also been undertaken groundwater, geophysics, stormwater management, surface water, dam break analysis, seepage analysis, waste classification. All these studies inform the final design.	Section 10 of SR Appendix D – Specialist Studies
DWS	In-Person	Wednesday, 11 September 2024	DWS will provide feedback on requirements to ensure all gaps can be addressed.	Noted	-
DWS	In-Person	Wednesday, 11 September 2024	DWS has requested an additional meeting to further discuss the design.	Noted	-
DWS	In-Person	Wednesday, 11 September 2024	What will water be used for on-site?	Water will be required during construction. It is possible that water from the plume control boreholes might be used, but this is still to be determined. Dirty water collected from the TSF will be re-used in the operation.	Section 2.4.1 of SR
DWS	In-Person	Wednesday, 11	Will there be a septic tank.	Ergo is still busy with the designs and will confirm the location.	-

© 2024 Kongiwe Environmental (Pty) Ltd

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
		September 2024			
DWS	In-Person	Wednesday, 11 September 2024	How is sanitation currently managed on-site.	There is a conservancy tank at the offices which gets emptied 3 times a week.	-
Ms Gerlinde Wilreker, Kongiwe	In-Person	Wednesday, 11 September 2024	A Waste Management Licence is being applied for as part of the EA process. Legally the DWS needs to issue a RoD for waste licences to the DMRE.	Discussions are still underway at higher level regarding this. The authorisation would be covered by the issuing of the WUL for mining related activities.	-
DWS	In-Person	Wednesday, 11 September 2024	What type of waste has been identified?	The identified waste falls under Category 3.	-
DWS	In-Person	Wednesday, 11 September 2024	DWS advised Ergo to align the operation of Brakpan with that of Withok.	Noted	-
Ms Mabusha Betty Nakene Department of Water and Sanitation Environmental Officer	Email Correspondence	Thursday, 28 October 2024	Good day Please send me the Withok Tailings storage facility draft scoping report for the Department of Water and Sanitation to comment as the interested and affected parties. And the contact details of the Officer working on the scoping report. Thank you.	Good day The draft Scoping Report is available for download here: https://kongiwe.com/projects/	-

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
				If you unable to download, please indicate via which online system we can send you the report. The Case officer from the DWS is Ms Thabelo Tshipate.	

2.3 Department of Agriculture, Land Reform and Rural Development (DALRRD)

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
Ms Bridget Tshikalange, Dalrrd	Email Correspondence	Tuesday, 05 November 2024	Good day I hereby acknowledge receipt of BAR for the development. Kindly note that an applicability application will be lodged with the department to verify if the land parcels involved are still within the Subdivision of Agricultural Land Act, Act 70 of 1970. should the Act be still applicable further advice will be given on the type of application to be lodged in terms of SALA.	Good day Ms Tshikalange Thank you for your email. The applicability application is noted. The land on which the proposed project is situated is zoned for mining. We trust you find this in order.	Figure 8.1 of SR

© 2024 Kongiwe Environmental (Pty) Ltd

2.4 Department of Forestry, Fisheries and Environment (DFFE)

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
Mashudu Mudau, Protected Areas Planning and Management Effectiveness, Department of Forestry, Fisheries and the Environment, Environment House	Email Correspondence	Thursday, 14 November 2024	Dear Ripfumelo The Directorate: Protected Areas Planning and Management Effectiveness, would like to thank you for the opportunity to review the Draft Scoping report for the Environmental Authorization and Integrated Water Use License Application for the Recommissioning of the Withok Tailings Storage Facility, Ekurhuleni (TSF), Gauteng Province 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,	Good day Mr Mudau, Thank you for your comment. The 5km buffer is noted and the management authority of the protected areas will be consulted.	EIA – Section 8.1.5.1

© 2024 Kongiwe Environmental (Pty) Ltd

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
			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. 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, located in the magisterial subdistrict of Brakpan of the City of Ekurhuleni Metropolitan Municipality. After conducting the review of the submitted documents, we have noted that the proposed recommissioning of the Withok tailings will not take place within any protected area in terms of Section 9 of the National Environmental Management: Protected Areas Act (NEMPAA), Act No. 57 of 2003. However, the proposed area is within the 5km buffer zone of a protected area as identified in terms of NEMPAA. The Andros Private Nature Reserve, Avalon Private Nature Reserve, and the Ian P. Coetzer Private Nature Reserve are all located within the farm Withok 131IR.		

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
			Section 8.5.6 Project Area in relation to Protected Areas states that "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". The EAP is reminded that the buffer zone measure is not 1km but 5km for nature reserve, therefore the existence of other protected areas must be considered in the Draft EIA phase.		

2.5 South African Heritage Resources Agency (SAHRA)

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
Ms Nokusho Ngobeni, Heritage Officer - SAHRA	Email Corresponded	Tuesday, 22 October 2024	Good day Thank you for the notification. Please upload the EA documents using the "Make an additional submission to the existing SAHRIS case" in the application selector wizard https://sahris.org.za/form/application-selector	Thank you for your response. We take note.	-

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
Ms Khanyisile Bonile, Heritage Officer: Development - Applications Unit-SAHRA	Email Corresponded	Tuesday, 05 November 2024	Good day, Please note that all development applications are processed via our online portal, the South African Heritage Resources Information System (SAHRIS) found at the following link: http://sahra.org.za/sahris/. We do not accept emailed, posted, hardcopy, faxed, website links or Dropbox links as official submissions. Please create an application on SAHRIS for each EA application and upload all documents pertaining to the Environmental Authorisation Application Process. As per section 24(4)b(iii) of NEMA and section 38(8) of the National Heritage Resources Act, Act 25 of 1999 (NHRA), an assessment of heritage resources must form part of the process, and the assessment must comply with section 38(3) of the NHRA. If a case already exists on SAHRIS regarding the development, please upload the documents to that case using the "Make an additional submission to an existing case" in the application selector wizard https://sahris.org.za/form/application-selector. Please ensure that all documents produced as part of the EA process are submitted as part of the application. **PLEASE NOTE** An application fee is now required for all section 38 applications. Please ensure that the SAHRIS application contains a proof of payment as per the notice at the	Dear Khanyisile Bonile, Thank you for your response. We take note. Please do not hesitate to contact us if you have any further queries.	-

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
			following link: https://sahris.org.za/help. A payment of R 2 000.00 for each application is required. Please make separate payments with the specific reference numbers. Applications that do not include a proof of payment will be considered incomplete and will not be processed until proof of payment is provided. Please make use of the SAHRIS Case ID in the payment reference. e.g. 12345/38.8. Please upload the PoP using the "Make an additional submission to an existing case" in the application selector wizard https://sahris.org.za/form/application-selector. The case officer assigned to your case will approve the submission and begin to process the case.		

2.6 Eskom (National Transmission Company South Africa SOC Ltd (NTCSA)

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
Mr John Geeringh, Senior Consultant Environmental Management Grid Planning: Land and Rights - NTCSA	Email Corresponded	Wednesday, 23 October 2024	Please send me a KMZ file of the affected property. Please find attached Eskom requirements for work at or near Eskom infrastructure and servitudes. **<u>The attachment entailed the following:</u>**	Good day Mr Geeringh Thank you for you response. Eskom's requirements are noted and have been sent to the applicant. Please find attached the project boundary as requested. Find attached the kmz for the project as requested.	-

© 2024 Kongiwe Environmental (Pty) Ltd

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
			The attachment details with the requirements from Eskom when working at or near infrastructure and servitudes: TO WHOM IT MAY CONCERN <u>Eskom requirements for work in or near Eskom servitudes.</u> 1. Eskom's rights and services must be acknowledged and respected at all times. 2. Eskom shall at all times retain unobstructed access to and egress from its servitudes. 3. Eskom's consent does not relieve the developer from obtaining the necessary statutory, land owner or municipal approvals. 4. Any cost incurred by Eskom as a result of non-compliance to any relevant environmental legislation will be charged to the developer. 5. If Eskom has to incur any expenditure in order to comply with statutory clearances or other regulations as a result of the developer's activities or because of the presence of his equipment or installation within the servitude restriction area, the developer shall pay such costs to Eskom on demand.		

© 2024 Kongiwe Environmental (Pty) Ltd

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
			6. The use of explosives of any type within 500 metres of Eskom's services shall only occur with Eskom's previous written permission. If such permission is granted the developer must give at least fourteen working days prior notice of the commencement of blasting. This allows time for arrangements to be made for supervision and/or precautionary instructions to be issued in terms of the blasting process. It is advisable to make application separately in this regard. 7. Changes in ground level may not infringe statutory ground to conductor clearances or statutory visibility clearances. After any changes in ground level, the surface shall be rehabilitated and stabilised so as to prevent erosion. The measures taken shall be to Eskom's satisfaction. 8. Eskom shall not be liable for the death of or injury to any person or for the loss of or damage to any property whether as a result of the encroachment or of the use of the servitude area by the developer, his/her agent, contractors, employees, successors in title, and assignees. The developer indemnifies Eskom against loss, claims or damages including claims pertaining to consequential damages by third parties and whether as a result of damage to or interruption		

© 2024 Kongiwe Environmental (Pty) Ltd

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
			of or interference with Eskom's services or apparatus or otherwise. Eskom will not be held responsible for damage to the developer's equipment. 9. No mechanical equipment, including mechanical excavators or high lifting machinery, shall be used in the vicinity of Eskom's apparatus and/or services, without prior written permission having been granted by Eskom. If such permission is granted the developer must give at least seven working days' notice prior to the commencement of work. This allows time for arrangements to be made for supervision and/or precautionary instructions to be issued by the relevant Eskom Manager Note: Where and electrical outage is required, at least fourteen work days are required to arrange it. 10. Eskom's rights and duties in the servitude shall be accepted as having prior right at all times and shall not be obstructed or interfered with. 11. Under no circumstances shall rubble, earth or other material be dumped within the servitude restriction area. The developer shall maintain		

© 2024 Kongiwe Environmental (Pty) Ltd

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
			the area concerned to Eskom's satisfaction. The developer shall be liable to Eskom for the cost of any remedial action which has to be carried out by Eskom. 12. The clearances between Eskom's live electrical equipment and the proposed construction work shall be observed as stipulated by *Regulation 15* of the *Electrical Machinery Regulations of the Occupational Health and Safety Act, 1993 (Act 85 of 1993).* 13. Equipment shall be regarded electrically live and therefore dangerous at all times. 14. In spite of the restrictions stipulated by Regulation 15 of the Electrical Machinery Regulations of the Occupational Health and Safety Act, 1993 (Act 85 of 1993), as an additional safety precaution, Eskom will not approve the erection of houses, or structures occupied or frequented by human beings, under the power lines or within the servitude restriction area. 15. Eskom may stipulate any additional requirements to highlight any possible exposure to Customers or Public to coming into contact or be exposed to any dangers of Eskom plant.		

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
			16. It is required of the developer to familiarise himself with all safety hazards related to Electrical plant. 17. Any third party servitudes encroaching on Eskom servitudes shall be registered against Eskom's title deed at the developer's own cost. If such a servitude is brought into being, its existence should be endorsed on the Eskom servitude deed concerned, while the third party's servitude deed must also include the rights of the affected Eskom servitude		

2.7 Rand Water

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
Ms Natalie Koneight, Rand Water	Email Corresponded	Thursday, 24 October 2024	Good day, Kindly note that Rand Water is now processing wayleave applications on an online web-based system. Please send all your applications (including environmental applications) in the online web-based system to allow Rand Water to review and process your applications.	Good day, Thank you for your email. Your response is noted.	-

© 2024 Kongiwe Environmental (Pty) Ltd

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
			Rand Water's resources are all focused on the online application system, so they are unable to handle applications manually. To utilize the system and continue sending Rand Water your wayleave applications you will need to register and set up a profile on the following URL address; https://wayleave.randwater.co.za/ Please find attached user training manual to assist you with registering your profile and uploading your applications. The following only concerns environmental applications: Once registered and now uploading an application please choose "Environmental application" under "Application type." Under 'responsible engineer' dropdown select/choose "place holder – Registration number default-000000", since your application does not require an engineer. Both options are found right at the beginning of the application process. Should you require assistance with registration or encounter any problems on the online system please contact any of the colleagues copied in this email to schedule a MS teams meeting."		

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
			I hope this will be of assistance. @Nomzamo Sithole (for your information) Regards		

2.8 Transnet

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
Mr Banzi Mlungu, Transnet Freight Rail JHB	Email Correspondence	Wednesday, 06 November 2024	Good day Please note that Transnet will not be affected. Regards	Dear Mr Mlungu Thank you for your response, Mr Mlungu. Your comment is noted. Do you wish to continue receiving notifications on this project?	-

© 2024 Kongiwe Environmental (Pty) Ltd

2.9 South African National Roads Agency (SANRAL)

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
Ria Barkhuizen (NR)	Email Correspondence	Thursday, 07 November 2024	Good day Please find attached SANRAL's comments. For any new applications and request for comments, use NRStat@nra.co.za email address. **The attachment entailed the following:** Your application dated 22 and 24 October 2024 has a reference. The South African National Roads Agency SOC Limited (SANRAL) has no objection to the project as no roads or interchanges under the jurisdiction of SANRAL are affected.	Dear Ms Barkhuizen Thank you very much for the response.	-
Ms Ria Barkhuizen, Environmental Officer	Email Correspondence	Friday, 22 November 2024	Good day Please find attached SANRAL's comments. For any new applications and request for comments, use NRStat@nra.co.za email address. Regards Ria	Thank you for your email and comment, it is appreciated.	

2.10 Gauteng Department of Health (DoH)

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
			To date, no comments have been received.		

3 Environmental Non-Governmental Organisations (NGOs)

3.1 Federation for a Sustainable Environment (FSE)

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
Ms Mariette Liefferink, CEO Federation for a Sustainable Environment	Email Corresponded	Wednesday, 23 October 2024	Dear Vanessa, I thank you for the notification. Kindly register the FSE as interested and affected party. Will there be a possibility to join the PPP meeting virtually?	Dear Mariette Thank you for your email. Kongiwe will register the FSE as an interested and affected party as per your request. We would like to set up an online meeting with you for 12 November 2024 at 10am, details of this meeting will follow next week. Please advise if you are available. Kind Regards	-

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
				Vanessa	
Ms Mariette Liefferink, Chief Executive Officer, Federation for Sustainable Environment	MS Teams Online Meeting	Thursday, 12 November 2024	Ms Liefferink requested a definition of the term 'self-rehabilitation' as it relates to the Withok TSF footprint over the past decade, as mentioned in the draft scoping report. She further stated that she does not consider 'self-rehabilitated' to be the appropriate term, as the area is a brownfield—a disturbed site.	Mr Ovens stated that, in terms of the definition of rehabilitation, it may not align perfectly, but over the course of 10 years, established grasses and naturally occurring vegetation did re-establish themselves on the site.	Section 2.2 of SR Figure 2-4 of SR
Ms Mariette Liefferink, Chief Executive Officer, Federation for Sustainable Environment	MS Teams Online Meeting	Thursday, 12 November 2024	Ms Liefferink inquired about the future land use of the remaining 150 hectares, noting that while the proposed TSF will cover 400 hectares, the original TSF footprint was 550 hectares, leaving 150 hectares unaccounted for.	Mr Ovens explained that, in terms of future land use, the area is still zoned for mining. The proposed area falls within the enclosed and fenced tailings dam footprint. He further clarified that, as per the current application, the plan is to use borrow pits from the remaining 150 ha to obtain material for the future rehabilitation of the side slopes of the TSF. Once the soil and cladding material are extracted, the borrow pits will be shaped and rehabilitated. However, he pointed out that the area will always remain within the mining footprint. Additionally, he noted that the area is part of the buffer zone, which is used for operational purposes, so there are no plans to develop it. It will continue to serve as a mining area.	Section 2.6.2 of SR
Ms Mariette Liefferink, Chief Executive Officer,	MS Teams Online Meeting	Thursday, 12 November 2024	Ms Liefferink noted that the TSF design will follow a centreline approach, which is a compromise between upstream and	Mr Ovens stated that he is not qualified to answer that question but assured that the comment would be	EIA – Section 3.2

© 2024 Kongiwe Environmental (Pty) Ltd

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
Federation for Sustainable Environment			downstream design, which is considered suitable for areas with moderate rainfall and moderate to high seismic risks, and more stable than upstream dams in an earthquake. However, she raised a concern based on her research that centre line TSFs usually have an impervious core which is supported by a localized zone of compacted tailings and an internal drain or filter. Placing rockfill next to the core zone (core support) is considered not suitable. It may lead to high hydraulic gradients through the core zone. She asked whether Ergo plans to mitigate this risk by preventing rockfill near the core.	noted, and the tailings dam engineer would respond accordingly.	
Ms Mariette Liefferink, Chief Executive Officer, Federation for Sustainable Environment	MS Teams Online Meeting	Thursday, 12 November 2024	Ms Liefferink asked that, since the TSF will be designed for the full life cycle of Ergo's operations, she assumes this would include closure and post-closure. She requested clarification on the post-closure monitoring period, asking whether it would be five years or if a different time frame is planned.	Mr Ovens stated that the post-closure monitoring period has not yet been determined, but it will be part of the ongoing Environmental Impact Assessment (EIA) study. This study will assess factors such as the water balance and the long-term management of the area. The necessary studies are still in progress.	Section 10 of SR EMPr – Section 9
Ms Mariette Liefferink, Chief Executive Officer, Federation for	MS Teams Online Meeting	Thursday, 12 November 2024	Ms Liefferink commented on the recommendation in the report to thicken and filter the tailings, which would help remove excess water and reduce the risk of catastrophic	Mr Ovens explained that the material will be a mixture of topsoil, cladding, and rock. He noted that a blend is necessary, as using only topsoil on the side slopes would result in erosion from rainfall. Regarding the	Section 2.6.2 of SR EMPr – Section 8

© 2024 Kongiwe Environmental (Pty) Ltd

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
Sustainable Environment			failure. She then raised a question about the concurrent rehabilitation of the side slopes of the Withok TSF, specifically regarding the soil taken from the borrow pits for cladding. She asked whether the soil to be recovered from the borrow pits will be topsoil and whether the vegetation planned for the area will be indigenous.	vegetation, he confirmed that an indigenous grass mix will be used.	
Ms Mariette Liefferink, Chief Executive Officer, Federation for Sustainable Environment	MS Teams Online Meeting	Thursday, 12 November 2024	Ms Liefferink raised a concern regarding the drainage from the Tsakane township, which is collected in the attenuation dam. She noted that the report mentions an upgrade to the attenuation dam wall and asked whether the evaporation paddocks would include sewage from the Tsakane township, stormwater drainage, and stormwater runoff from the TSF.	Mr Ovens explained that the attenuation dam is part of the clean water diversion system around the Withok TSF. Any water falling on top of the tailings dam is considered "dirty" water and would be directed to the evaporation paddocks at the base of the TSF, which ultimately drain into the return water dam. He clarified that water from the Tsakane Township, including stormwater and sewage, is managed separately by a different dam (the attenuation dam) located on the eastern side of the TSF, and away from it. The attenuation dam wall is being upgraded to accommodate future climatic events, such as large rainstorms, to prevent clean surface stormwater from impacting the side of the tailings dam. This upgrade involves creating a large trench within the fenced area of the Withok TSF to safely channel stormwater, ensuring that it does not mix with the dirty water from	Section 2.4.1 of SR EIA - Section 3.3

© 2024 Kongiwe Environmental (Pty) Ltd

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
				the TSF. The previous system, which used two pipelines, was deemed inadequate for handling large future events. Mr Ovens noted that this diversion will result in the loss of 150 hectares for the mine, as the trench must run along the southern boundary of the TSF.	
Ms Mariette Liefferink, Chief Executive Officer, Federation for Sustainable Environment	MS Teams Online Meeting	Thursday, 12 November 2024	Ms Liefferink assumed that, like the Brakpan TSF, the Withok TSF will remain in perpetuity as there won't be any reclamation opportunities in the future. She then asked whether the HDPE liner will withstand the test of time, as she doubts it will last for 100 years or more, but she is uncertain about what alternative options might be available.	Mr Ovens explained that they have technical information on the proposed HDPE liner and its expected lifespan. He noted that factors such as UV exposure are considered, but the liner will be covered, which complicates the ability to predict its exact lifespan. He acknowledged that no one could provide a definitive answer on how long it would last but emphasized that they are following the prescribed regulations for waste norms and standards, which guide Ergo's approach. He also mentioned that the scoping report details water monitoring plans, including boreholes to detect any issues. If any problems are identified, remediation measures, such as pollution control boreholes, will be implemented as necessary.	Section 2.4.1 of SR EMPr – Section 8 and 9
Ms Gerlinde Wilreker, Project Manager (EAP), Kongiwe	MS Teams Online Meeting	Thursday, 12 November 2024	Ms Liefferink acknowledged that the question of the HDPE liner's longevity is a complex and important one, noting that many people may	Mr Ovens confirmed that recycling and reuse would indeed be part of the process. He further explained that the primary purpose of the evaporation paddocks is for the attenuation of stormwater runoff from the side slopes of the tailings dam. Water flows from the	Section 2.4.1 and 2.6 of SR EIA – Section 3.3

© 2024 Kongiwe Environmental (Pty) Ltd

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
Environmental (Pty) Ltd			assume it will stand the test of time indefinitely, which is not the case. She then raised a concern about the reliance on evaporation paddocks for water management, suggesting that focusing solely on evaporation rather than reuse and recycling might not align with the rapid growth of ESG investment funds, which are driving innovations in water use and mine water management practices. She further asked whether the water in the evaporation paddocks would be used solely for evaporation, or if it would also be recycled or reused, particularly in hydraulic mining operations.	stormwater runoff into the paddocks, and from there, it moves sequentially from one paddock to the next until it ultimately reports to the return water dam. From the return water dam, the water is then pumped to Ergo Plant for re-use in Ergo's processes.	
Ms Mariette Liefferink, Chief Executive Officer, Federation for Sustainable Environment	MS Teams Online Meeting	Thursday, 12 November 2024	Ms Liefferink asked Mr Ovens to provide this information in writing for her to review, as she had additional comments regarding the evaporation paddocks.	Mr Ovens explained that the ultimate purpose of the evaporation paddocks is to capture any water that falls on the TSF and direct it to the return water dams in one continuous flow. If not properly managed, there is a risk of the dams overtopping. Mr Tshamano clarified that the term "evaporation paddocks" may be misleading. He explained that these are simply containment paddocks, structures designed to capture and contain water running from the slopes	Section 2.4.1 of SR EIA Section 3.3

© 2024 Kongiwe Environmental (Pty) Ltd

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
				to the bottom of the tailings. The water is then directed from the paddocks to the collector pipes and ultimately to the return water dam. The primary purpose is not evaporation, but to manage and contain the immediate runoff.	
Ms Mariette Liefferink, Chief Executive Officer, Federation for Sustainable Environment	MS Teams Online Meeting	Thursday, 12 November 2024	Ms Liefferink expressed some confusion, stating that, based on her understanding of the report, the dirty stormwater from the side slopes is either reused in the system or, if not, is directed to the catchment paddocks where it evaporates. She quoted directly from the report, which states that the dirty water, if not reused, is attenuated in the paddocks and allowed to evaporate. She clarified that in this context, "evaporates" implies that the water is not reused or treated, but simply left to evaporate.	Mr Ovens acknowledged Ms Liefferink's point and stated that they would revisit the wording in the report to provide further clarification. He confirmed that the intention, as explained by Mr Tshamano, is to direct the water to the return water dams. However, if the dams are at capacity, the water would be attenuated in the paddocks. He agreed that the current wording may require further explanation and assured that they would review it.	Section 2.4.1 of SR EIA - Section 3.3 Appendix D2 – Surface Water Impact Aassessment
Ms Mariette Liefferink, Chief Executive Officer, Federation for Sustainable Environment	MS Teams Online Meeting	Thursday, 12 November 2024	Ms Liefferink pointed out that the report mentions the disposal of excess unusable water, which could range from brine (saltwater) to solutions containing metals, minerals, and inorganic compounds that are unsuitable for use by people, animals, or plants. She then asked where this excess or unusable water would be disposed of, given that it is unfit for any use. Additionally, she inquired whether Ergo intends	Mr Tshamano clarified that they are not applying to discharge or dispose of any water within the facility. The intention is to cycle and reuse the water wherever possible. ***Post meeting note: This section deals with post-closure. Drain water would be treated to discharge quality and released into the receiving environment. The brine from the treatment process would be***	Section 2.6 of SR EIA – Section 3.3

© 2024 Kongiwe Environmental (Pty) Ltd

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
			to recover any of the minerals or metals from this unusable water.	***pumped to the top surface where it will be evaporated.***	
Ms Mariette Liefferink, Chief Executive Officer, Federation for Sustainable Environment	MS Teams Online Meeting	Thursday, 12 November 2024	Ms Liefferink stated that she would review the report again and refer to the relevant sections. She suggested that if her understanding is correct, those sections may need to be amended or revised. However, she acknowledged that she may be mistaken, as she is not qualified to comment on these technical aspects. She then asked whether the evaporation paddocks (or containment paddocks) would be lined facilities.	Mr Tshamano confirmed that the paddocks will be within the footprint of the facility and, therefore, they will be lined.	Section 2.4 of SR EMPr – Section 8
Ms Mariette Liefferink, Chief Executive Officer, Federation for Sustainable Environment	MS Teams Online Meeting	Thursday, 12 November 2024	Ms Liefferink noted that, similar to the return water, the brine from the treatment process is mentioned in the report. She expressed uncertainty about the treatment process, as brine is typically produced through reverse osmosis. The report indicates that the brine will be pumped to the top surface of the TSF and evaporated. She asked if this refers to the pool on top of the TSF and whether that pool will also contain the brine.	Mr Ovens added that the proposed closure plan for the facility includes stopping deposition, after which the water from the solution trenches will be treated and then discharged. However, the brine will be pumped back onto the top paddocks of the facility. He further stated that this is the current closure design, which will remain in place until there is no more dirty water emanating from the site.	Section 2.6 of SR EIA – Section 3.6 Appendix D7 – Closure and Rehabilitation Plan
Ms Mariette Liefferink, Chief Executive Officer,	MS Teams Online Meeting	Thursday, 12 November 2024	Ms Liefferink acknowledged that the brine would contain high salinity and possibly metals. She then referenced a point in the report that	The project team noted the Ms Liefferink's point.	EIA – Section 3.6

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
Federation for Sustainable Environment			mentions the operating infrastructure being repurposed at closure to meet post-closure requirements. She raised a concern regarding the MPRD regulations, noting that the future land use or closure plan must be determined from the commencement of mining. This is necessary so that it can inform the closure and future land use objectives going forward.		Appendix D7 – Closure and Rehabilitation Plan
Ms Mariette Liefferink, Chief Executive Officer, Federation for Sustainable Environment	MS Teams Online Meeting	Thursday, 12 November 2024	Ms Liefferink inquired about the future land use or post closure land use.	Mr Ovens responded, explaining that, based on the current information, they do not believe the tailings dams will be reclaimed. The focus will be on vegetation of the side slopes. He suggested that the proposed post-closure land use would likely be wilderness. Mr Tshamano added that the goal is to mimic the topography of the surrounding area. The remaining concerns after closure would primarily involve managing the water aspect and groundwater.	Section 2.6 of SR EIA – Section 3.6 Appendix D7 – Closure and Rehabilitation Plan
Ms Mariette Liefferink, Chief Executive Officer, Federation for Sustainable Environment	MS Teams Online Meeting	Thursday, 12 November 2024	Ms Liefferink acknowledged that the tailings storage facility cannot be repurposed for residential development. However, she emphasized that, according to the MPRDA Regulations, the future land use must align with the principles of sustainable development. She noted that wilderness status may not qualify as	Mr Ovens acknowledged Ms Liefferink's point, noting that while he understood her concern, Ergo is currently conducting specialist studies in this area. He highlighted that Ergo is exploring biodiversity offset programs and mentioned that wild animals have already been released on the Brakpan tailings facility, with ongoing monitoring of how the facility is supporting these	EIA – Section 3.6 Appendix D7 – Closure and Rehabilitation Plan

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
			a sustainable land use but added that this could be a discussion for another time.	animals. He further emphasized that Ergo is proactively working on this issue, with specialists studying and measuring the biodiversity impact, particularly in relation to the ongoing vegetation and rehabilitation efforts at the tailings site	
Ms Mariette Liefferink, Chief Executive Officer, Federation for Sustainable Environment	MS Teams Online Meeting	Thursday, 12 November 2024	Ms Liefferink acknowledged the validity of Mr Ovens' comment regarding biodiversity and sustainability, referencing GISTM standards and ICMM objectives, which aim for zero biodiversity loss and a net gain. She suggested this could be a useful framework for post-closure land use planning. She then returned to her concern about the evaporation ponds, quoting from the report that they present risks to receptors, including land, water, wildlife, and community health and safety. The report also mentions that breaches in the embankment of the evaporation ponds could lead to seepage and contamination. She proposed considering alternatives to evaporation ponds, such as mist cannons, mechanical evaporation, thermal brine concentrators, or crystallization plants, as suggested by Professor Jannie Maree. She acknowledged the complexity of the issue, she expressed a desire to re-read the relevant	Mr Ovens acknowledged that, as the project is still in the scoping phase, they accept all comments and will reassess the concerns raised. He noted that these points would also be considered in the context of the relevant specialist studies moving forward.	EMPr – Section 8 Appendix D2 – Surface Water Impact Aassessment

© 2024 Kongiwe Environmental (Pty) Ltd

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
			sections of the report for a better understanding.		
Ms Mariette Liefferink, Chief Executive Officer, Federation for Sustainable Environment	MS Teams Online Meeting	Thursday, 12 November 2024	Ms Liefferink raised a concern regarding the risk of acid mine drainage, noting that the long-term management and associated costs are difficult to assess, as mentioned in the report. She inquired how the financial provisions for the pumping and treatment of extraneous water would be determined in accordance with the Financial Provision Regulations. She emphasized that these provisions must account for the ongoing management, including latent and residual impacts.	Mr Ovens explained that Kongiwe has been tasked with undertaking the financial provision calculation as part of the Environmental Impact Assessment. He noted that they would use detailed groundwater reports in this process, but he clarified that he did not want to speak on their behalf regarding the specifics of the calculations. Kongiwe team confirmed that they are currently working on the calculations for the financial provisions, which will be incorporated into Ergo's broader financial provision. This will be managed and kept with the DMR (Department of Mineral Resources).	EIA –8.7 EMPR – Section 8 Appendix D3 – Groundwater Impact Assessment Appendix D7 – Closure and rehabilitation Plan
Ms Mariette Liefferink, Chief Executive Officer, Federation for Sustainable Environment	MS Teams Online Meeting	Thursday, 12 November 2024	Ms Liefferink raised concerns regarding the proposed Withok TSF, referencing the scoping report which mentions that the project overlaps with priority focus areas and protected areas, specifically the Avalon Private Nature Reserve, located one kilometre from the TSF. While the report states that the project does not overlap with threatened ecosystems, it does mention overlap with a non-priority NFEPA wetland and that the site falls within the grassland biome,	Mr Ovens responded that, as part of the approval process for the project, approval is required from the Council of Geoscience, particularly regarding the protection of the dolomitic aquifer. He explained that a detailed geotechnical study has been conducted, including recommendations on how to proceed on dolomitic land. This forms part of the ongoing design process and the Environmental Impact Assessment, which includes specialist studies. Mr Ovens	EIA – Section 8.5 and 8.7 EMPR – Section 8 Appendix D 1 - Biodiversity

© 2024 Kongiwe Environmental (Pty) Ltd

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
			with three species of conservation concern. The report also notes that the wetland and grassland habitats are in a relatively natural condition. Ms Liefferink inquired whether the intention is to maintain this natural condition during both construction and deposition.	acknowledged Ms Liefferink's comment and confirmed it has been noted.	
Ms Mariette Liefferink, Chief Executive Officer, Federation for Sustainable Environment	MS Teams Online Meeting	Thursday, 12 November 2024	She further referred to page 130 of the scoping report, where it mentions a dolomitic aquifer, which raised concerns due to dolomite being a porous rock. The report indicates that groundwater from the top of the TSF will drain radially, potentially impacting underlying aquifers. Ms Liefferink asked what precautionary measures are in place to ensure that the dolomitic aquifers, which typically contain high-quality water, are not adversely affected.	Ms Wilreker indicated that the impact assessment and mitigation measures will be updated during the EIA phase. She noted that extensive groundwater modelling and testing are currently underway, and the results will be presented as part of the process.	Section 10 of SR EIA – Section 8.7 Appendix D3 – Ggroundwater Imapct assessment
Ms Mariette Liefferink, Chief Executive Officer, Federation for Sustainable Environment	MS Teams Online Meeting	Thursday, 12 November 2024	Ms Liefferink raised concerns regarding the groundwater quality near the Withok and Brakpan TSFs, noting elevated sulphide levels but reassuringly pointing out that uranium concentrations in the East Rand are the lowest in the Witwatersrand goldfield, suggesting that uranium is not a major issue. She also addressed the health risks associated with particulate	Ms Wilreker responded to the question on cumulative impacts, confirming that the air quality impact assessment includes the cumulative effects of both the Brakpan and Withok TSFs. She explained that they are modelling different scenarios, such as Withok being halfway built and Brakpan fully rehabilitated, and that they are considering various scenarios for both PM10 and PM2.5 concentrations in their analysis.	Section 10 of SR EIA – Section 8.8 Appendix D4 – Air Quality Impact assessment

© 2024 Kongiwe Environmental (Pty) Ltd

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
			matter, referencing the scoping report's mention of both short- and long-term exposure to dust, particularly in the Highveld priority area. She pointed out that dust fallout is often averaged over a month, potentially underreporting spikes in dust levels on specific days, and requested more detailed data on PM2.5 and PM10 concentrations. She emphasized the importance of health assessments to address these risks. She then asked if, as mentioned in the scoping report, the assessment of cumulative impacts would include not only the Withok TSF but also other minor residue deposits in the vicinity		
Ms Mariette Liefferink, Chief Executive Officer, Federation for Sustainable Environment	MS Teams Online Meeting	Thursday, 12 November 2024	Ms Liefferink inquired whether any responses had been received regarding land claims in the area, noting that the land test indicated there were no land claims.	Mr Tshamano clarified that, contrary to the previous answer, they had received information from the competent authority regarding land claims. He noted that two land claims had been identified, and they were currently under internal review before responding further. ***Post meeting note: Ms Edith Mokgoko from DALRRD, clarified that the letter references a challenge to the Amendment Act of 2014 and states that the land claims are considered invalid in view of the finding of the Constitutional Court. As a result, the claims were***	Appendix C – Section 2.4.6

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
				not investigated further to confirm their validity. The claimants listed in the letter are being kept on record until Parliament passes new legislation that allows for the re-opening of land claim submissions.	
Ms Mariette Liefferink, Chief Executive Officer, Federation for Sustainable Environment	MS Teams Online Meeting	Thursday, 12 November 2024	Ms Liefferink acknowledged the applicant's adherence to the GISTM standards, noting that this was a positive aspect. She then referred to the GDARD 2011 Feasibility Study on Reclamation of Mine Residue Areas for Development Purposes: Strategy and Implementation Plan, which outlines that mine residue deposits include not only TSFs but also other areas such as waste rock dumps, quarries, water storage facilities, return water dams, and areas impacted by tailings spillage, among others. She inquired whether the rehabilitation objectives would encompass all these mine residue deposits within the mining right area if any of these exist within the mining right footprint, as per the requirements of the strategy.	Mr Ovens stated that the Ergo has a responsibility, under its mining rights, to close the site in accordance with the MPRDA Requirements.	Section 4 of SR Appendix D7 – Closure and Rehabilitation Plan
Ms Mariette Liefferink, Chief Executive Officer, Federation for	MS Teams Online Meeting	Thursday, 12 November 2024	Ms Liefferink concluded by expressing her gratitude, thanking the project team for their patience and for the courteous responses provided throughout the discussion.	Ms Wilreker acknowledged Ms Liefferink's comments, expressing appreciation for her detailed feedback and noting that her input is always valuable to the team.	-

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
Sustainable Environment					

3.2 KlipRiviersberg Sustainability Association (KlipSA)

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
Mr Andrew Barker, Town and Regional Planner, KlipSA	Email Correspondence	Wednesday, 06 November 2024	Hi Thank you for the notification of this application. Thank you also for your brief presentation and introduction of the project at the Klip River Catchment Forum yesterday. I am unfortunately not able to attend your open day on Saturday 9 November and perhaps we could chat about this application when we meet. One aspect that I would ask to be incorporated in the design of the tailing's facility is to consider the future use and management of the topographical and infrastructural features that are created for the future "beyond mining ". One of the challenges that we have in current time from the early legacy of mining, is trying to	Good day Andrew Thank you for your email. We have added you as an interested and affected party. The design and closure of the TSF has been considered in the design report, as has the GDRARD buffer of development around tailings facilities. We take note of your request, and it would be beneficial to have a meeting including Ergo to discuss this further.	Section 4 of SR

© 2024 Kongiwe Environmental (Pty) Ltd

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
			achieve effective and efficient land development interventions where mining infrastructure has been left behind. We obviously do not have a perfect 20:20 future vision. However, we should at least consider what could be the nature of future use in the vicinity and on infrastructure left behind. Please register me as an IAP for this application.		
Mr Andrew Barker, Town and Regional Planner, KlipSA	In-Person	Friday, 15 November 2024	Mr Barker inquired about the future land use of the proposed site and suggested considering potential recreational opportunities. Specifically, he asked what could be developed on the site and what could be done with the facility once mining operations have concluded	Mr Ovens explained that the rehabilitation process, environmental impacts, and other related criteria are central to determining the final plans for the site. These factors are essential in shaping the proposed end-use and the overall closure strategy. He emphasized that the primary priority is to ensure the creation of a safe environment for the facility, which will guide the entire rehabilitation and site closure process.	Section 2.6 of SR Appendix D7 – Closure and Rehabilitation Plan
Dr Kousar Banu Hoorzook, Programme Manager for UJ Process Energy Environment Technology Station, UJ	In-Person	Friday, 15 November 2024	Dr Hoorzook suggested considering phytoremediation and artificial wetlands as long-term solutions during the scoping phase. She emphasized the importance of incorporating these approaches into the overall rehabilitation strategy.	The project team noted the suggestion	-

© 2024 Kongiwe Environmental (Pty) Ltd

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
Dr Kousar Banu Hoorzook, Programme Manager for UJ Process Energy Environment Technology Station, UJ	In-Person	Friday, 15 November 2024	Dr Hoorzook inquired about air quality monitoring in the long term, specifically asking if measures will be implemented to allow the community to monitor air quality over time. She expressed uncertainty about the current plans and requested clarification on what is being done in this regard for community monitoring.	Mr Ovens explained that Ergo works with an independent company called Skyside, which conducts dust fallout monitoring for Ergo's operations. He noted that this information is made publicly available through a quarterly forum, where community concerns can be raised and addressed. Mr Barker added that Professor Annegarn has been running dust monitoring for decades, starting in the 1980s when reclamation efforts began. He mentioned that Professor Annegarn has an extensive collection of records and oversees the quarterly meetings, and the consultants involved. Mr Barker emphasized that the monitoring and reporting process is thorough and occurs every few months.	Section 10 of SR Appendix D4 – Air Quality Impact Assessment
Dr Kousar Banu Hoorzook, Programme Manager for UJ Process Energy Environment Technology Station, UJ	In-Person	Friday, 15 November 2024	Dr Hoorzook inquired about the groundwater and surface water monitoring, specifically asking whether the testing will involve continuous monitoring or if it will be a one-time assessment during the scoping phase.	Mr Ovens clarified that groundwater and surface water monitoring is conducted monthly at the TSF complex. While most other sites typically monitor on a quarterly basis.	Section 10 of SR EMPR – Section 8, 9.5 and 9.6

© 2024 Kongiwe Environmental (Pty) Ltd

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
Dr Kousar Banu Hoorzook, Programme Manager for UJ Process Energy Environment Technology Station, UJ	In-Person	Friday, 15 November 2024	Dr Hoorzook suggested that, at a later stage or during an appropriate phase, collaboration could occur with SMMEs that have developed prototypes with the CSIR to convert acid mine drainage water into potable water. She proposed discussing how this technology could be applied to water in surrounding communities, potentially converting it into drinkable water, if feasible.	Mr Ovens responded that, as an organization and as a country, such initiatives will be important for the future. However, he noted that there are regulatory hurdles to overcome, as a mine cannot sell water according to the current legislation. He mentioned that these regulations may evolve over time.	-

3.3 Klipriver-Suikerboschrand Conservancy

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
Ms Roxy du Toit, Chairperson, Klipriver-Suikerboschrand Conservancy	Email Correspondence	Wednesday, 06 November 2024	Attention Ms. Viljoen. Good afternoon Ms Viljoen, Please register the Klipriver- Suikerboschrand Conservancy as an interested and affected party for this proposed project, and supply all information in hardcopy format. Thank you.	Dear Ms Du Toit Thank you for your email. We have registered the Klipriver- Suikerboschrand Conservancy as an interested and affected party. We will appreciate if we can have the full contact details of the du Toit family. We need cell no and email addresses.	-

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
			Kind regards,R du Toit, Chairperson, Klipriver-Suikerboschrand Conservancy	Thank you	

3.4 Johannesburg Heritage Foundation

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
Klip River Forum	Zoom Online Meeting	Tuesday, 05 November 2024	Dear Vanesa and Stakeholder Team, We appreciate being included in your circulation of this important notice. Brakpan is, however, outside our area of interest so we will not register for this one. Best regards, WYNAND DREYER PrEng Trustee	Good day Mr Dreyer, Thank you for your response. We will remove you from the database.	Appendix C1 – Stakeholder Database

© 2024 Kongiwe Environmental (Pty) Ltd

4 Forums

4.1 Klip River Forum

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
Klip River Forum	Zoom Online Meeting	Tuesday, 05 November 2024	No comments were raised for the Withok Project.		

4.2 Blesbokspruit Forum

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
Mr Marc de Fontaine, Senior Water Quality Advisor, Rand Water	Zoom Online Meeting	Tuesday, 07 November 2024	Mr de Fontaine asked about the potential impact of having two relatively large, almost "mega" dumps in close proximity to one another. He raised concerns about possible underground activity, such as the movement of water, and whether their proximity could lead to any interaction or destabilization. He noted that this question could be addressed at a later stage.	Ms Wilreker acknowledged the question, stating that unfortunately there wasn't an immediate answer. She assured Mr de Fontaine that the issue would be raised with the engineers currently designing the facility, as well as the groundwater specialists, who would be able to provide a detailed response. She thanked him and assured that the matter was noted.	Section 10 of SR EIA – Section 8.7 Appendix D3 – Groundwater Impact Assessment
Ms Mariette Liefferink, CEO, Federation for a Sustainable Environment	Zoom Online Meeting	Tuesday, 07 November 2024	Ms Liefferink raised several important concerns regarding the expansion of the Brakpan Tailings Storage Facility (TSF) and its potential long-term impact. She referred to a paper presented in 2008, titled 'South African Challenges Pertaining	Ms Wilreker acknowledged Ms Liefferink's concerns and assured that the Global Industry Standard on Tailings Management (GISTM) is being considered in the design of the project. She also emphasized that South Africa has its own norms, standards, and	Section 4 and 10 of SR EMPr – Section 8

© 2024 Kongiwe Environmental (Pty) Ltd

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
			to Mine Closure, Regional Mining, and Closure Strategy', which highlighted issues related to incomplete dump reclamation. She noted that remining of dumps often fails due to either lack of funding or the heterogeneous nature of the dumps, which can make them difficult to process. She expressed concern about the expansion of the Brakpan TSF, particularly the need to ensure that even economically non-viable deposits are also remined, in alignment with recommendations from the Council for Geoscience. She emphasized that tailings storage facilities like Brakpan TSF, particularly after expansion, would likely stand indefinitely, and it was crucial to have robust management measures in place throughout all phases of the project, including the post-closure phase. Ms Liefferink urged that the project adhere to the Global Industry Standard on Tailings Management (GISTM), as this would ensure comprehensive management measures are maintained throughout the entire lifespan of the facility, including after closure.	regulations regarding the design of tailings storage facilities, all of which are being taken into account. She assured that the team is mindful of both the environmental and socio-economic aspects of the project.	

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
			Additionally, she recommended that economic diversification and succession planning be integrated into the remining process. She highlighted the example of the Riverlea community, where DRDGOLD (ERGO Mining), in collaboration with Umsizi and other local organizations, established a successful community garden. Ms Liefferink encouraged similar initiatives that would benefit mining-affected communities, contributing to their socio-economic development.		
Dr Henk Coetzee, Specialist Scientist, Council for Geoscience	Zoom Online Meeting	Tuesday, 07 November 2024	Dr Coetzee raised a concern regarding the Klip River, specifically noting an increase in sulphide electrical conductivity (EC) in the Rietspruit area. He asked whether this issue was being taken into account in the design to ensure that the project would not exacerbate the problem and, ideally, would help mitigate it as part of the closure processes.	Ms Wilreker confirmed that the Withok TSF is being designed with a class three liner, as required by the relevant departments. This design is specifically intended to prevent groundwater ingress and mitigate potential contamination issues.	Section 10 of SR EMPR – Section 8 Appendix D2 – Surface Water Impact Assessment

© 2024 Kongiwe Environmental (Pty) Ltd

5 Key Stakeholders and Interested and Affected Parties (I&APs)

5.1 Interested and Affected Parties (I&APs)

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
Ms Dineo Makwa, Town Planning Technician, Lesedi Local Municipality (LLM)	MS Teams Online Meeting	Tuesday, 06 November 2024	Ms Makwa inquired whether any support is required from the Lesedi Local Municipality (LLM), as she noticed that the project falls under the City of Ekurhuleni Metropolitan Municipality.	Ms Wilreker clarified that the LLM was identified as an indirectly affected municipality, as it is adjacent to the project area. She explained that, as part of the public participation process, the municipality needs to be informed about the project.	Section 2.1 of SR Figure 2-2 of SR EIA – Section 1.8
Ms Dineo Makwa, Town Planning Technician, Lesedi Local Municipality (LLM)	MS Teams Online Meeting	Tuesday, 06 November 2024	Ms Makwa requested that Kongiwe share the presentation and recording with them so that they could review it in detail. She further mentioned that while the LLM currently does not have an environmental officer, they are receiving support from the Sedibeng District Municipality and would circulate the report for comments through that channel	Ms Wilreker accepted Ms Makwa's suggestion and confirmed that they would forward the presentation and the recording to the LLM for review.	-
Mr Sibanyoni, Council Office	Open Day	Saturday, 09 November 2024	Mr Sibanyoni inquired if the cultural studies were conducted.	Ms Wilreker indicated that a Heritage study is currently underway, and at present, there are no graves or items of historical significance identified. She further explained that the area designated for development was historically a Tailings Storage Facility (TSF). However, the final results of the Heritage study will be fully addressed during the Environmental Impact Assessment (EIA) phase.	Section 10 of SR EIA – Section 8.9 Appendix D5 – Heritage Impact Assessment

© 2024 Kongiwe Environmental (Pty) Ltd

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
Community Member	Open Day	Saturday, 09 November 2024	The community member inquired whether studies on socio-economic impacts, pollution, and biodiversity had been undertaken.	Ms Wilreker confirmed that socio-economic and biodiversity studies, amongst others, were being undertaken. She indicated that the studies are still ongoing, and the findings will be discussed during the EIA phase.	Section 10 of SR EIA – Section 9 Appendix D1 – Biodiversity Appendix D4 – Air Quality Impact Assessment Appendix D6 – Socio-economic Impact Assessment
Community Member	Open Day	Saturday, 09 November 2024	The community member inquired whether the community would benefit from the project.	Mr Phete (Ergo) explained that once all the studies are completed, their findings will be presented during the EIA phase, which will inform Ergo of potential employment opportunities	Section 7 and 10 of SR EIA – Section 9 EMPr – Section 8 Appendix D6 – Socio-economic Impact Assessment
Mr Sibanyoni, Council Office	Open Day	Saturday, 09 November 2024	Mr Sibanyoni inquired whether the environmental studies currently being	Mr Phete explained that Ergo already holds a mining right. The studies being conducted are specifically for	Section 10 of SR EIA – Section 2.3

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
			undertaken are assisting the mine in obtaining its mining right.	the proposed Recommissioning of the Withok TSF project	
Mr Sibanyoni, Council Office	Open Day	Saturday, 09 November 2024	Mr Sibanyoni inquired about the current DRDGOLD SLP and requested if it could be shared with him.	Mr Phete indicated that the SLP would be shared with Mr Sibanyoni through the Ward Councillor. However, Mr Sibanyoni could also access it via the website. Mr Phete emphasized that the SLP is unrelated to the proposed project and should not be confused with it.	-
Mr Joshuah, Community Member, Ward 112	Open Day	Saturday, 09 November 2024	Mr Joshuah expressed his appreciation for the public participation efforts made by Kongiwe Environmental prior to the commencement of the project. He also conveyed his gratitude that the project will benefit the community	Ms Wilreker and Mr Phete noted the comment.	-
Community Member	Open Day	Saturday, 09 November 2024	The community member inquired whether sustainable projects would be implemented during the operational phase of the project.	Mr Phete indicated that these matters will be addressed during the operational phase. At present, the priority is to gather the community's concerns to secure the necessary authorization.	-
Community Member	Open Day	Saturday, 09 November 2024	The community member suggested that the surrounding wards submit proposals to Ergo outlining their community needs.	Mr Phete acknowledged the comment but emphasized that while the mine is willing to assist where possible, the local government should take the lead in addressing community needs.	-
Community Member	Open Day	Saturday, 09 November 2024	The community member inquired about the design of the dam structure.	Ms Wilreker explained that DRDGOLD has a Tailings Management Policy and a Tailings Storage Facility (TSF) Management Standard in place. The company is committed to adhering to these and is aiming to align	Section 4 of SR Design Report EMPr – Section 8

© 2024 Kongiwe Environmental (Pty) Ltd

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
				with the Global Industry Standard on Tailings Management (GISTM), where applicable. The Withok TSF will be designed, constructed, and managed in accordance with the Code of Practice for Mine Residue Deposits (SANS 10286) and the Dam Safety Regulations (GNR. 139 of 24 February 2012), as well as the following: SA Dam Safety Classification: Under the National Water Act (NWA), dams of a certain size must be classified. The Classification system is similar to SANS 10286, though the criteria differ slightly. Dams over 5 meters in height and containing more than 50,000m³ of water must be registered with the Dam Safety Office (DSO) of the Department of Water and Sanitation (DWS), who will classify the dam based on data submitted by the applicant. The Withok TSF will be classified as a Category III dam. The Withok TSF must be designed by an Approved Professional Person (APP), leading an Approved Professional Team (APT). Applications for approval of the APP will be submitted to both the DWS DSO and the Engineering Council of South Africa (ECSA).	

© 2024 Kongiwe Environmental (Pty) Ltd

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
Community Member	Open Day	Saturday, 09 November 2024	The community member inquired whether permanent job opportunities would be available after the construction phase.	Ms Wilreker explained that Ergo will have the opportunity to assess potential employment opportunities after the completion of the EIA phase, which will guide its decisions.	Section 10 of SR EMPr – Section 8 Appendix D6 – Socio-economic Impact Assessment
Mr Joshuah, Community Member, Ward 112	Open Day	Saturday, 09 November 2024	Mr Joshuah raised a concern that Ergo should not work with individuals who claim to represent the community but have criminal intentions.	Ms Wilreker noted the comment.	-
Community Member	Open Day	Saturday, 09 November 2024	The community members explained that they are affected by dust from the Brakpan TSF, which can become so intense that visibility at a distance is severely reduced.	Ms Wilreker acknowledged the comment and expressed appreciation, noting that it would help guide the specialists in assessing the full extent of the impact.	Section 10 of SR EIA – Section 8.8 Appendix D4
Community Member	Open Day	Saturday, 09 November 2024	The community member inquired whether radioactivity studies had been conducted.	Ms Wilreker indicated that the specialist is still undertaking the study, and the findings will be presented during the EIA phase.	Section 10 of SR Radiological Public Safety Assessment
Community Member	Open Day	Saturday, 09 November 2024	The community member requested an additional mobile clinic, as the surrounding communities currently share a single mobile clinic.	Ms Wilreker noted the comment and explained that it would be shared with Ergo.	-
Ms Nthabiseng Thobakgale (SGB -	Open Day	Saturday, 09 November 2024	Ms Thobakgale inquired whether; after obtaining the Environmental Authorisation and initiating the recommissioning of the TSF, if the applicant	Ms Mngwengwe indicated that the assessment of the project's impact does not conclude at the end of the EIA process. While the EIA provides a thorough	EMPr – Section 8 and 9

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
Mega Primary School)			will continue to assess the project's impact or the assessment will conclude at the end of the EIA phase.	evaluation of potential impacts prior to project commencement, ongoing monitoring and assessment are undertaken throughout the project's lifecycle, to assist in identifying and addressing any unpredicted impacts and ensuring compliance with environmental regulations.	
Ms Nthabiseng Thobakgale, SGB Member- Mega Primary School	Open Day	Saturday, 09 November 2024	Ms Thobakgale asked if they could be provided with information on how to protect themselves from the project impacts in terms of health. Ms Thobakgale requested that the response be forwarded via email.	Ms Mngwengwe noted the comment.	Section 10 of SR EMPr – Section 8 Appendix D10 – Health Impact Assessment
Mr Lawrence Ward Committee 99	Open Day	Saturday, 09 November 2024	Mr Lawrence asked how the community, in particularly residents in Ward 99, will benefit in terms of employment and other economic opportunities.	Ms Mngwengwe explained that the local people will be considered for employment and economic opportunities and that the approach aims to enhance community engagement and ensure that the benefits of economic development are felt within the local population	Section 10 of SR EMPr – Section 8
Ms Nomadlozi Mofokeng	Open Day	Saturday, 09 November 2024	Ms Mofokeng inquired about the requirements to be considered for economic opportunities.	Ms Mngwengwe explained that following the completion of the EIA process and the subsequent granting of Environmental Authorisation by DMRE, the applicant will determine the skills required for the recommissioning of the Withok TSF.	EMPr – Section 8

© 2024 Kongiwe Environmental (Pty) Ltd

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
				She further indicated the information regarding economic possibilities will be distributed through advertising with relevant requirements.	
Mr Bheki Mtshali, Ward 99	Open Day	Saturday, 09 November 2024	Mr Mtshali inquired about the impacts of deposition of mining material on groundwater and the effects of blasting.	Ms Mngwengwe explained that the Groundwater Impact Assessment will be conducted to evaluate the potential impacts of the proposed project and to identify appropriate mitigation measures. One of the primary concerns is the risk of seepage from the TSF, which could contaminate groundwater if not managed effectively. She said to address this, that the facility will be lined with an HDPE liner to prevent seepage. Additionally, comprehensive groundwater management plans that include monitoring of groundwater will be implemented. She further said it is important to note that no blasting will take place on-site. The proposed project is not a mining project, it only involves the deposition of final residue within the Withok TSF. The recommissioning of the Withok TSF will utilise a methodology similar to that previously employed, specifically cyclone deposition combined with a floating decant pumping system.	Section 10 of SR EIA – Section 8.7 EMPr – Section 8 and 9.6 Appendix D1 – Groundwater Impact Assessment Section 2.4 of SR EIA – Section 3

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
Ms Phephelaphi Cynthia Tshabalala	Open Day	Saturday, 09 November 2024	Ms Tshabalala asked about the economic opportunities that will arise from the recommissioning of the TSF. She also enquired if there will be considerations for including individuals with disabilities in these opportunities.	Ms Mngwengwe explained that opportunities that could result from the proposed project could include job creation and local business support. However, the applicant will determine the skills and services required for the recommissioning of the Withok TSF. Individuals with disabilities will be considered for these opportunities.	Section 10 of SR EMPr – Section 8 Appendix D6 Socio-Economic Impact Assessment
Ms Phephelaphi Cynthia Tshabalala	Open Day	Saturday, 09 November 2024	Ms Tshabalala inquired how long will it take to get the Environmental Authorisation.	Ms Mngwengwe said that the Environmental Authorisation process takes about a year to conclude.	Section 1.5.3 of SR EIA – Section 2.3
Mr Bongani Daemane	Open Day	Saturday, 09 November 2024	Mr Daemane commented that the Recommissioning of the TSF project is still in its early stages.	Ms Mngwengwe said that Mr Daemane was correct and that the EIA is part of the planning phase of the development. She further explained that the project will undergo evaluations by DMRE (Competent Authority), and they will decide to grant or reject the application. No project will commence without the Environmental Authorisation.	Section 1.5.3 of SR EIA – Section 2.3 EMPr – Section 6.1
Ms Khosi Malaka, Ward 85	Open Day	Saturday, 09 November 2024	Ms Malaka raised the following concerns regarding the Brakpan TSF and its impact on the community in Ward 85: • **Health Impacts from Dust Emissions** Ms Malaka highlighted the significant negative impact of dust emissions from the Brakpan TSF, which are causing health issues among local	Mr Phete expressed that he was thankful that Mr Malaka highlighted the significant issues related to the TSF and its impact on the community in Ward 85. He said that he understands the concerns regarding the dust emissions and their health implications for residents. As part of its tailings management efforts, Ergo is actively working to mitigate dust from the TSF. While he acknowledges that the dust situation was	Section 10 of SR EIA-Section 7 and 9 Appendix D6 Air Quality Impact Assessment

© 2024 Kongiwe Environmental (Pty) Ltd

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
			residents. She emphasized the need for immediate action to mitigate these effects. • **Lack of Action by Fraser Alexander** She expressed concern that Fraser Alexander has not taken steps to address the dust problem or implement any corrective measures to protect the community. • **Absence of Community Development Contributions** Ms Malaka also pointed out that Fraser Alexander has not made any contributions to essential community development projects, such as the construction of crèches, soccer fields, or parks, which are vital for improving the quality of life in the area. • **Lack of Reporting by Ward Councillor** Ms Malaka expressed frustration that the ward councillor has not provided updates or reports on the status of the Brakpan TSF project, leaving the	more severe 5 years ago, Ergo has made noticeable progress, including the ongoing vegetation of the slope embankment of the TSF. However, he agrees that there is still more work to be done to further improve the situation. The concerns are duly noted and will be addressed in Ergo's quarterly dust fall-out meetings. Currently, Ergo has engaged independent specialists to conduct dust monitoring. Their findings are taken seriously, and Ergo implements their recommendations to enhance the dust management strategies. In relation to the proposed project, the EIA process and the Air Quality Impact Assessment will thoroughly evaluate the potential and cumulative impacts and appropriate mitigation measures will be developed. He said that Ms Malaka's inputs are invaluable in identifying shortcomings in efforts to improve the dust situation, and encouraged residents to report such concerns, as they are directly affected. It is crucial to submit formal concerns in situations like this, as informal feedback can easily be overlooked. And also,	Appendix D10 Health Impact assessment

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
			community uninformed about its progress and potential impacts. • **Objection to the Recommissioning of the TSF** Lastly, Ms Malaka stated her personal objection to the recommissioning of the TSF, as she believes it will exacerbate the existing environmental and health issues in the community. Ms Malaka further expressed that she strongly advocated for the open day to be held in Ward 85, as this is where the most directly affected residents live. Community members from Ward 112 and 99 must also be invited to participate in this discussion, ensuring that all voices are heard regarding the TSF's operations and their effects on their communities.	by formalising her concerns, Ma Malaka will be able to follow up on responses. Mr Phete indicated that he understands Ms Malaka's objection to the recommissioning of the TSF, particularly given the potential for worsening existing issues. Active efforts are being made to improve the current condition. He fully supports the call for the Open Day to be held in Ward 85, where the most affected residents reside. This is an important scoping phase, and the issues raised will be taken into account during the consultation for the Environmental Impact Report (EIR) phase ***Post-meeting note: The TSF is located in Ward 99, with Ward 112 being directly adjacent to the project site. Ward 85 is located further away from the site but will be assessed in terms of extent of impacts.***	
Mr Bafana Maseko	Open Day	Saturday, 09 November 2024	Mr Maseko indicated that they are experiencing issues with dust emissions from the Brakpan TSF. What mitigation measures are being implemented to address this problem?	Mr Phete indicated that there are ongoing efforts to revegetate the dust sources at the Brakpan TSF. Together with these efforts, dust monitoring is conducted to inform and guide the mitigation strategy effectively. The findings from the EIA Report and the Air Quality Impact Assessment study will further	Section 10 of SR EIA-Section 7 and 9

© 2024 Kongiwe Environmental (Pty) Ltd

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
				enhance the mitigation measures that will be implemented	Appendix D4 Air Quality Impact Assessment
Mr Bafana Maseko	Open Day	Saturday, 09 November 2024	Mr Maseko inquired about the deadline for the commenting period.	Ms Mngwengwe explained that stakeholders are welcome to share their comments with Kongiwe until the 22nd of November 2024.	Appendix C9
Ms Agnes Magavu	Open Day	Saturday, 09 November 2024	Ms Magavu inquired about the opportunities available for people with disabilities and requested the provision of an interpreter for members of the deaf community.	Mr Tshisevhe explained that employment opportunities would be considered in the second stage of the project, as the current stage is focused on the introduction of the project. He also noted the suggestion to provide an interpreter for future meetings.	Section 10 of SR EMPr – Section 8
Mr Bheki Ngcobo	Open Day	Saturday, 09 November 2024	Mr Ngcobo inquired about the expected start date for employment opportunities.	Mr Ovens explained that the commencement of the project is dependent upon the approval of the application by the DMRE, which is expected by the end of next year.	Section 1.5.3 of SR EMPr – Section 6.1
Mr Thuso Buthelezi	Open Day	Saturday, 09 November 2024	Mr Buthelezi inquired whether the locations of the libraries displaying the project posters would benefit from the project, as Ward 99, where the project is situated, has not previously benefited from Ergo projects in their area.	Ms Mngwengwe explained that, in accordance with NEMA regulations, all communities that are directly and indirectly affected by the project must be informed.	Section 7 of SR EIA – Section 7 Appendix C
Mr Jabulani Shongwe	Open Day	Saturday, 09 November 2024	Mr Shongwe inquired about how the community would benefit from such projects.	Ms Mngwengwe stated that the community could benefit from opportunities such as employment, bursaries, learnerships, skills transfer, and other similar initiatives.	Section 10 of SR EIA – Section 9.5

© 2024 Kongiwe Environmental (Pty) Ltd

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
					Appendix D6 Socio-Economic Impact Assessment
Ms Lindiwe Mtshabe	Open Day	Saturday, 09 November 2024	Ms Mtshabe inquired about how the community could own shares in the project.	Mr Tshisevhe stated that the DRDGOLD's shares are available on the stock exchange, similar to other companies, and the public can purchase them. However, he mentioned that he would consult with management regarding potential opportunities for the community.	-
Mr Dumisani Mjani	Open Day	Saturday, 09 November 2024	Mr Mjani inquired about the expected start date of the project and the role of Ergo in fast-tracking its progress.	Mr Tshisevhe stated that the project could only commence once Ergo receives the Environmental Authorisation and Water Use Licence. Ms Mngwengwe added that the Environmental Impact Assessment (EIA) process is expected to be completed by July 2025.	Section 1.5.3 of SR EMPR – Section 6.1
Ms Phindi Mananga	Open Day	Saturday, 09 November 2024	Ms Mananga inquired whether training would be provided for unskilled workers once the project is successfully underway.	Mr Tshisevhe explained that training is provided for all employees before they commence work on the project.	EMPr – Section 8
Ms Sibongile Dala	Open Day	Saturday, 09 November 2024	Ms Dala inquired about how dust would be managed, as the project has the potential to generate significant dust.	Mr Tshamano explained that dust suppression measures would be implemented. He further clarified that vegetation would be planted along the Tailings Storage Facility (TSF) every 10 metres to help mitigate dust.	Section 2.6.2 of SR EMPr – Section 8

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
Ms Khosi Malaka	Open Day	Saturday, 09 November 2024	Ms Malaka suggested that the next open day be held at Galesdale, Ward 85, and Ward 112, as these areas are directly impacted by the project. She highlighted that people in these areas are currently suffering from health issues such as asthma, sight complications, and other dust-related problems.	Mr Mphete explained the proper procedure to follow if a community member's health is affected by the tailings dam operation. He also outlined some of the mitigation measures currently being implemented to minimize the project's impact on the community. ***Post-meeting note: The TSF is located in Ward 99, with Ward 112 being directly adjacent to the project site. Ward 85 is located further away from the site The current venue is in close proximity to both wards 112 and 85.***	Section 10 of SR EIA -Section 1.8
Ms Constance Mahlalela	Open Day	Saturday, 09 November 2024	Ms Mahlalela inquired about how Ergo can empower small businesses and whether the company could hire equipment, such as compressors, from her business.	***Post-meeting note: Ergo has a procurement process in place. The primary contractor appointed through a tender process must ensure that employment opportunities are advertised locally giving surrounding communities the opportunity to apply.***	EMPr – Section 8
Mr Henry Buitendacht	Email Corresponded	22 October 2024	Good day Can you please arrange for an open day in Geluksdal Hall as ext 22 is far from Geluksdal and people might not be able to attend in ext 22	Good day Mr Buitendacht Thank you for your response. The venue for the open day has already been set and was recommended by the Ward Councillor and chosen for its proximity to the site. We will consider your proposed venue for the EIA Phase of the Project. There will be an online meeting on Wed 6 November 2024.	-

© 2024 Kongiwe Environmental (Pty) Ltd

Stakeholder	Consultation Method	Date of Comments Received	Issues Raised	Response to issues as mandated by the Applicant	Section Reference in the Report
Mr Victor S.O. Nkosi	Email Corresponded	Monday, 18 November 2024	Good day At the Church Street in Henley on Klip, the a is an EIA notice displayed. Unfortunately it is almost damaged for one to read. I am a member of the St Paul Anglican church and EIA is displayed just next to the church. One of our member just noticed this notice this past weekend, and a number of engagement sessions have already gone past. First, I will be glad if you can send us maybe through the email the original communications done on this regards so that we can also participate if necessary. Secondly, we appreciate your invites to the forthcoming sessions to keep ourselves abreast on developments in our area.	Good day Mr. Nkosi Thank you for your email. Please find attached the background information document and the non-technical summary for the proposed Withok recommissioning project. We will add you as an interested and affected party to our database so that you can receive further communication with regards to the project	Appendix C1 – Stakeholder Database

Appendix D:
Terrestrial Compliance Statement

TERRESTRIAL BIODIVERSITY COMPLIANCE STATEMENT FOR THE PROPOSED WITHOK TAILINGS STORAGE FACILITY RECOMMISSIONING PROJECT

Ekurhuleni Metropolitan Municipality, Gauteng Province, South Africa

18/07/2024

Prepared by:

The Biodiversity Company

Cell: +27 81 319 1225

Fax: +27 86 527 1965

info@thebiodiversitycompany.com

www.thebiodiversitycompany.com

Report Name	TERRESTRIAL BIODIVERSITY COMPLIANCE STATEMENT FOR THE PROPOSED WITHOK TAILINGS STORAGE FACILITY RECOMMISSIONING PROJECT	
Specialist Theme	Terrestrial Biodiversity Compliance Statement	
Project Reference	Withok TSF Recommissioning	
Report Version	Draft 1 / 18/07/2024	
Environmental Assessment Practitioner		
Fieldwork	Byron Goris	
Report Writer	Sarah Newman (Cand Sci. Nat. 158474)	
Reviewer	Carami Burger (SACNASP 121757)	
Reviewer	Andrew Husted (SACNASP 400213/11)	
Declaration	The Biodiversity Company and its associates operate as independent consultants under the auspice of the South African Council for Natural Scientific Professions. We declare that we have no affiliation with or vested financial interests in the proponent, other than for work performed under the Environmental Impact Assessment Regulations, Amended. We have no conflicting interests in the undertaking of this activity and have no interests in secondary developments resulting from the authorisation of this project. We have no vested interest in the project, other than to provide a professional service within the constraints of the project (timing, time and budget) based on the principals of science.	

Table of Contents

1 Introduction 5
1.1 Background 5
1.2 Project Description 7
1.3 Scope of Work 10
1.4 Assumptions and Limitations 10
1.5 Legislative Framework 10
2 Fieldwork 12
2.1 Biodiversity Field Assessment 12
3 Results & Discussion 13
3.1 Ecologically Important Landscape Features 13
3.2 Biodiversity Field Survey 14
3.3 Habitat Assessment 17
3.4 Site Ecological Importance 20
3.4.1 Desktop Ecological Sensitivity 21
3.4.2 Screening Tool Comparison 24
4 Impact Management and Mitigation Plan 25
5 Conclusion 32
5.1 Impact Statement 32
5.2 Specialist Opinion 32
6 References 33
7 Appendix Items 35
7.1 Appendix A: Methods 35
7.1.1 Desktop Dataset Assessment 35
7.2 Appendix B: Terrestrial Site Ecological Importance 38
7.3 Appendix C – Specialist Declaration of Independence 42
7.4 Appendix D – Specialist CVs 46

List of Tables

Table 1-1 Terrestrial Biodiversity Compliance Statement information requirements as per the relevant protocol, including the location of the information within this report 11

Table 3-1 Summary of relevance of the proposed project to ecologically important landscape features 13

Table 3-2 Sensitivity summary of the survey points and habitat types delineated within the PAOI 14

Table 3-3 Table providing descriptions of the habitat types delineated for the PAOI 18

Table 3-4 Summary of habitat types delineated within the PAOI 20

Table 3-5 Summary of the screening tool vs specialist assigned sensitivities 24

Table 4-1 Project specific mitigation measures including requirements for timeframes, roles and responsibilities 26

Table 7-1 Summary of Conservation Importance (CI) criteria 38

Table 7-2 Summary of Functional Integrity (FI) criteria 39

Table 7-3 Matrix used to derive Biodiversity Importance (BI) from Functional Integrity (FI) and Conservation Importance (CI) 39

Table 7-4 Summary of Receptor Resilience (RR) criteria 40

Table 7-5 Matrix used to derive Site Ecological Importance from Receptor Resilience (RR) and Biodiversity Importance (BI) 40

Table 7-6 Guideline for interpreting Site Ecological Importance in the context of proposed activities 41

List of Figures

Figure 1-1 Map illustrating the regional context of the PAOI 6
Figure 1-2 Map illustrating the Project Area of Influence (PAOI) 6
Figure 1-3 Map illustrating the project location, as provided by Kongiwe (2024) 9
Figure 1-4 Map illustrating the site infrastructure associated with the project, as provided by Kongiwe (2024) 9
Figure 2-1 Map illustrating the field tracks of the field survey 12
Figure 3-1 Habitats identified within the PAOI 17
Figure 3-2 Terrestrial Biodiversity Theme Sensitivity 21
Figure 3-3 Plant Species Theme Sensitivity 22
Figure 3-4 Animal Species Theme Sensitivity 23
Figure 3-5 Map illustrating the site ecological importance for the PAOI 24

1 Introduction

1.1 Background

The Biodiversity Company (TBC) was appointed to undertake a terrestrial biodiversity baseline assessment for the proposed Withok Tailings Storage Facility (TSF) Recommissioning Project near Springs, Gauteng Province. The assessment area will be referred to as the Project Area of Influence (PAOI) for reporting purposes. A map presenting the regional context of the PAOI can be seen in Figure 1-1 and a map presenting the PAOI can be seen in Figure 1-2.

To determine the baseline ecological state of the area and to present a detailed description of the receiving environment, both a desktop assessment, as well as a field survey on the 17th of April 2024, were conducted. Furthermore, the desktop assessment and field survey both involved the detection, identification and description of any locally relevant sensitive receptors and habitats. The manner in which these sensitive features may be affected by the proposed development was also investigated.

This assessment was conducted in accordance with the amendments to the Environmental Impact Assessment Regulations, 2014 (No. 326, 7 April 2017) of the National Environmental Management Act (NEMA), 1998 (Act No. 107 of 1998). The approach has taken cognisance of the recently published Government Notice 320 in terms of NEMA dated 20 March 2020 as well as the Government Notice 1150 in terms of NEMA dated 30 October 2020: “Procedures for the Assessment and Minimum Criteria for Reporting on Identified Environmental Themes in terms of Sections 24(5)(a) and (h) and 44 of the National Environmental Management Act, 1998, when applying for Environmental Authorisation”. The National Web based Environmental Screening Tool has characterised the terrestrial biodiversity theme for the area as ‘Very High’ sensitivity (National Environmental Screening Tool, 2024).

The purpose of conducting the specialist study is to provide relevant input into the Environmental Authorisation application process, with a focus on the proposed activities and their impacts associated with the project. This report, after taking into consideration the findings and recommendations provided by the specialist herein, should inform and guide the Registered Environmental Assessment Practitioner (EAP) and regulatory authorities, enabling informed decision making as to the ecological viability of the proposed project.

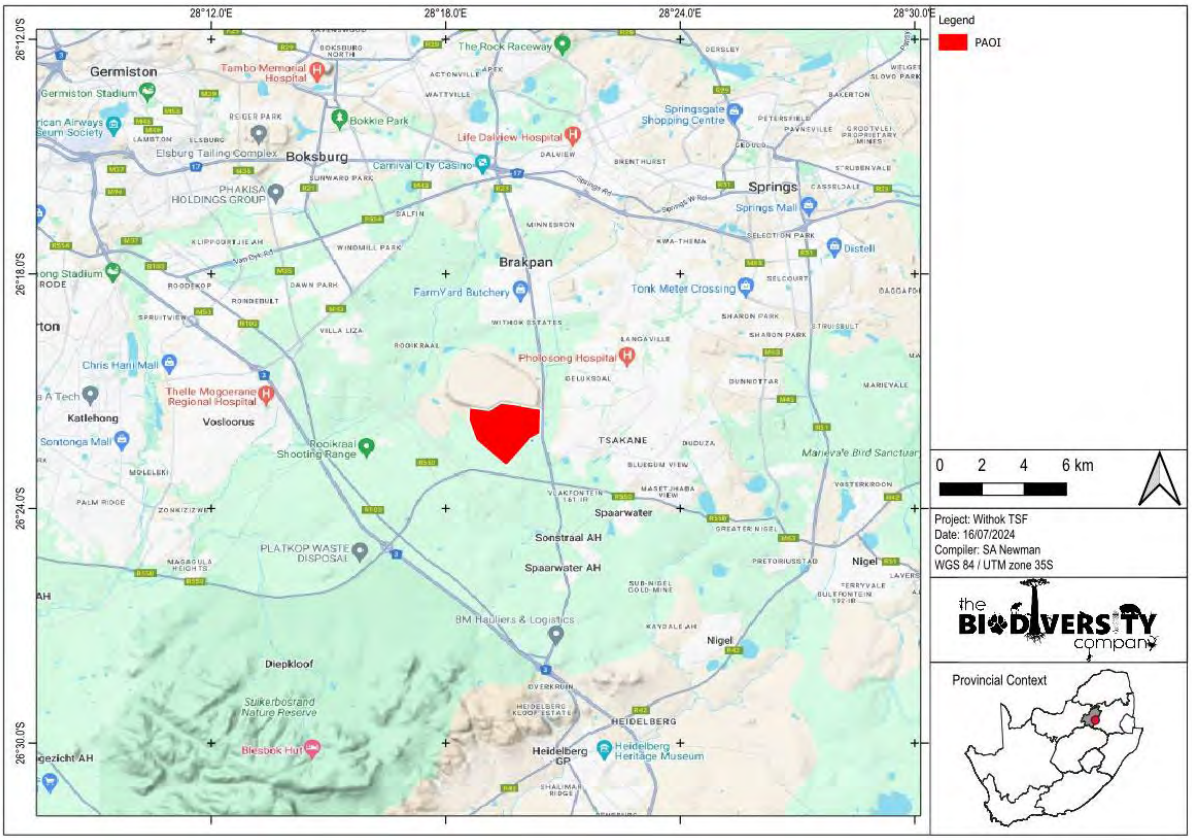


Figure 1-1 Map illustrating the regional context of the PAOI

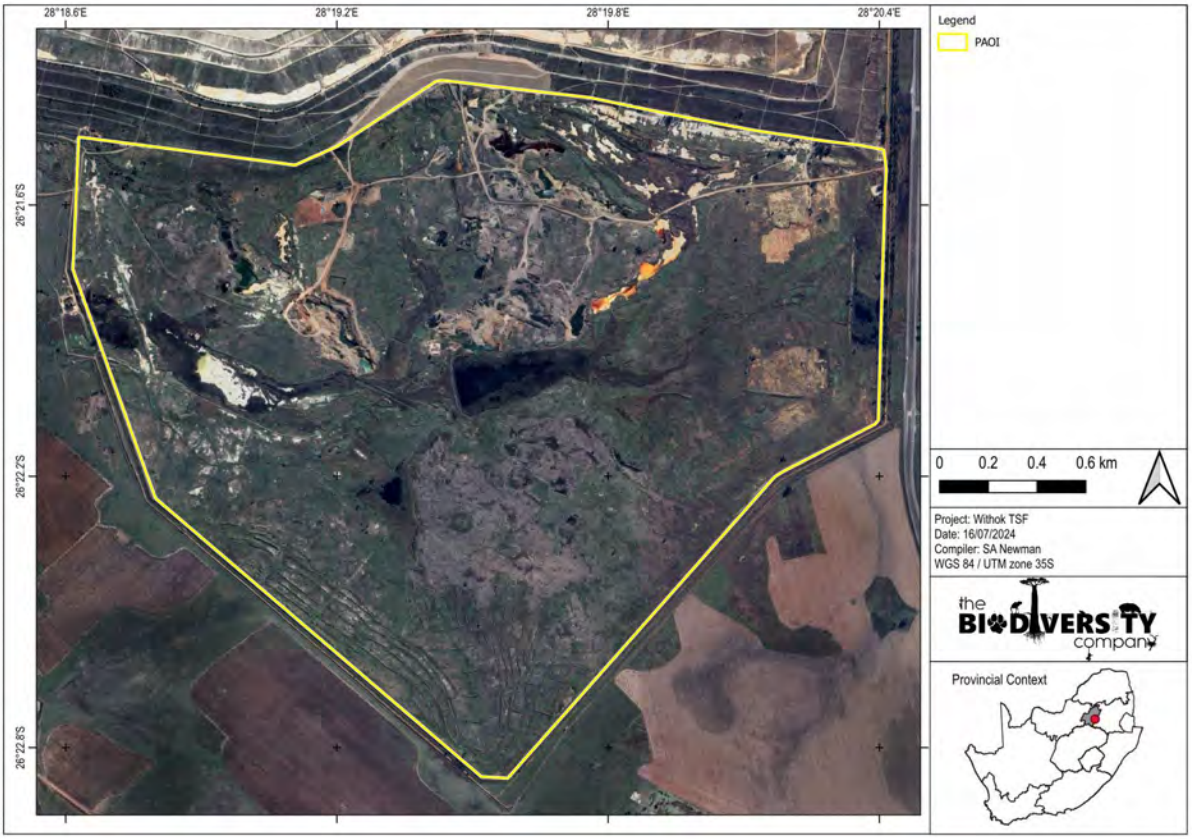


Figure 1-2 Map illustrating the Project Area of Influence (PAOI)

1.2 Project Description

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.

Ergo has identified the 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), with a the original Withok TSF having been reclaimed over several years ending 2006.

The following components are currently present on site:

- Access roads;
- Withok TSF footprint; and
- Brakpan TSF and associated stormwater management infrastructure.

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 for reuse.

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

The intended recommissioning of the Withok TSF is to utilise 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 pre-deposition design components are listed below:

- 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; and
- 250 mm diameter cyclones, complete with feed pipes, valves, overflow pipes.

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 for recycling. The remainder is evaporated in the catchment paddocks.
- Drain flows will also be collected in the same collector pipe.
- The Withok complex will have a dual compartment RWD (with approved DWS liner system). 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^3 to comply with GN R704. Additional capacity will provide operational flexibility and reduce the risk of discharge during high rainfall periods. Accordingly, the design capacity of the Withok RWD is approximately100 000m^3.
- Water must be returned to process, from the Withok RWD, at a rate of up to 9 800m^3/day.

Several drainage courses dissect the site. These consist of a draining course draining northwards from the southern tip of the original footprint and several smaller draining courses running southwards from the interface with the Brakpan TSF, all of which are tributaries to a draining course running from east to west through the centre of the site. The latter has its origins in Tsakane township, located to the east of Heidelberg Road, and drains first into an Attenuation Dam just east of the road. Historically, overflow from the Attenuation Dam was released into a culvert which crosses below the site discharging 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, that diverts water from a sump, east to west along the south flank of the optimised Withok TSF footprint.

The Attenuation dam wall will also be upgraded as part of the project.

Ergo Mining is cognisant of the Global Industry Standard on Tailings Management (GISTM) and the Safety-First principles. The final life of the Withok TSF design, construction, operation and monitoring will align with these requirements where appropriate.

The project location can be seen presented in Figure 1-3 and the proposed site infrastructure can be seen presented in Figure 1-4.

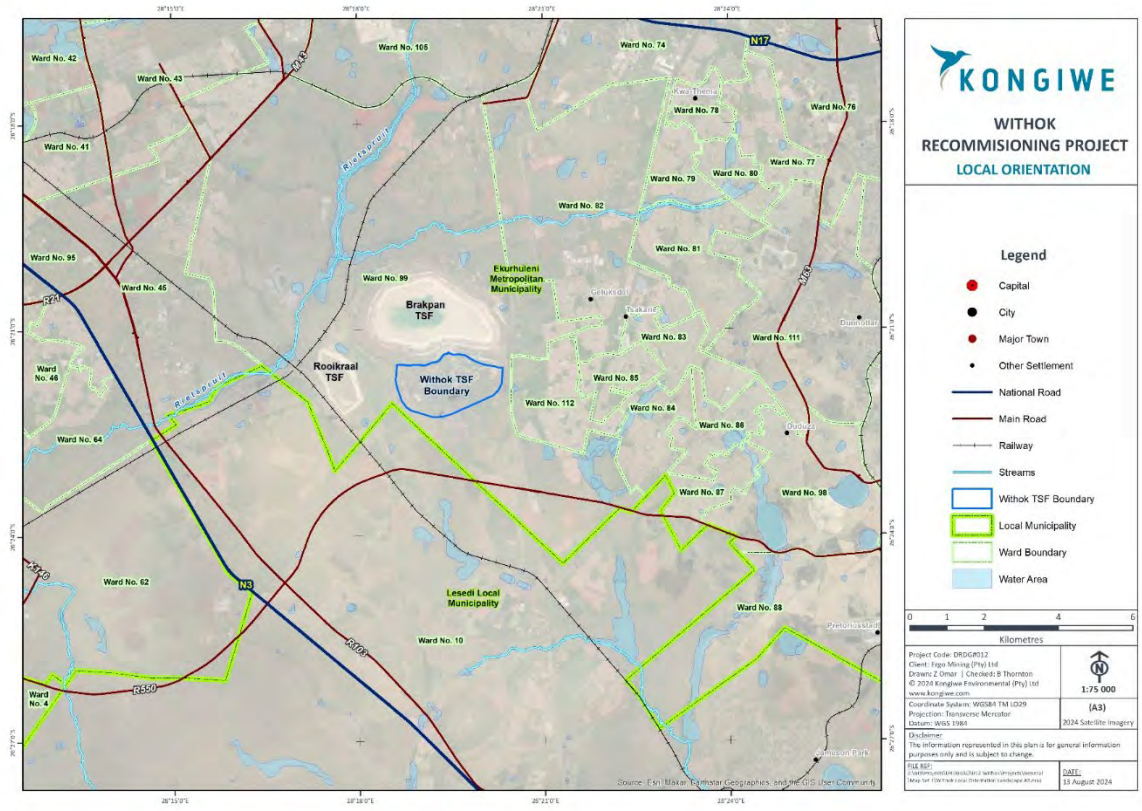


Figure 1-3 Map illustrating the project location, as provided by Kongiwe (2024)

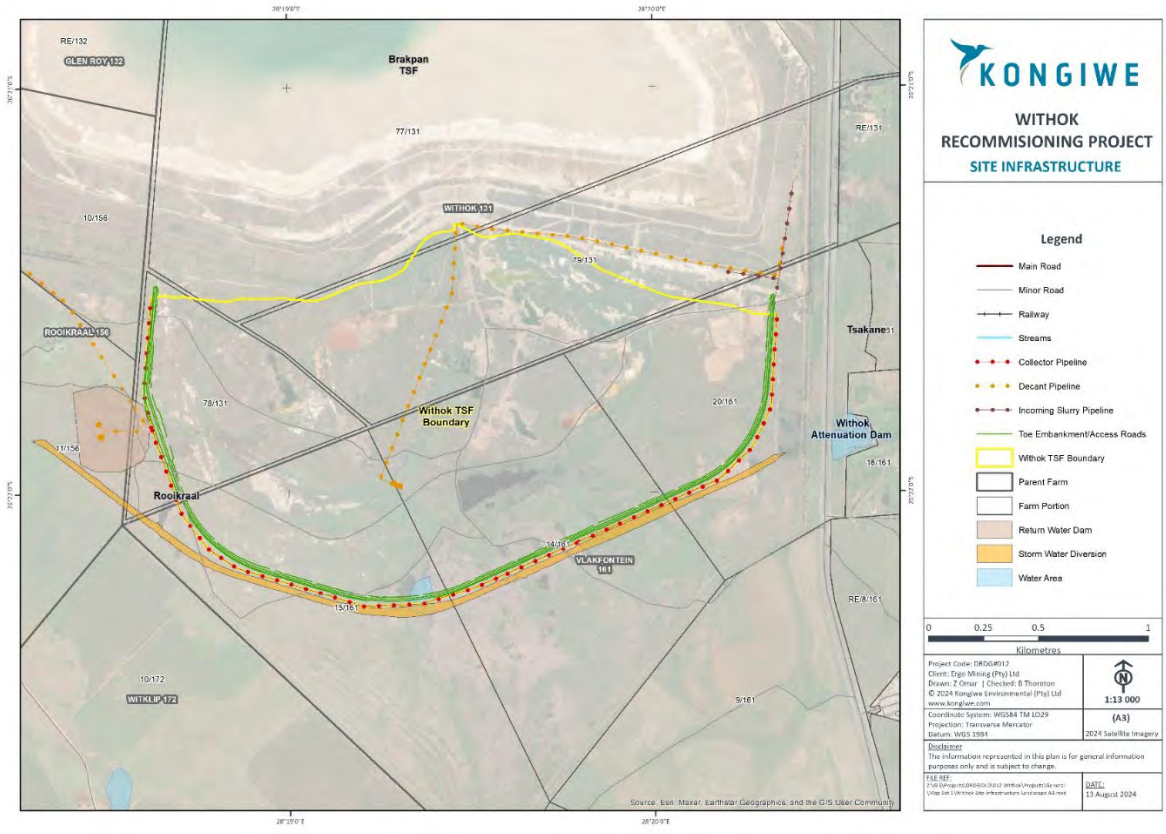


Figure 1-4 Map illustrating the site infrastructure associated with the project, as provided by Kongiwe (2024)

1.3 Scope of Work

The aim of the biodiversity assessment was to provide information to guide the risk of the proposed activity to the current state of the associated ecosystems within the development area. This was achieved through the following:

- Desktop assessment to identify the ecologically important features within the landscape comprising of terrestrial features;
- Desktop assessment to identify possible Species of Conservation Concern (SCC) that occur within the landscape;
- Field survey to record flora and fauna species, especially Species of Conservation Concern (SCC);
- Determination of the Site Ecological Importance (SEI), also commonly referred to as sensitivity; and
- The prescription of mitigation measures for identified risks.

1.4 Assumptions and Limitations

The following assumptions and limitations are applicable for this assessment:

- It is assumed that all information received from the client and landowner is accurate;
- All datasets accessed and utilised for this assessment are considered to be representative of the most recent and suitable data for the intended purposes;
- The assessment area (PAOI) was based on the footprint areas as provided by the client, and any alterations to the area and/or missing GIS information pertaining to the assessment area would have affected the area surveyed and hence the results of this assessment;
- The area was surveyed during a single site visit, therefore, this assessment does not consider temporal trends (note that the data collected is considered sufficient to derive a meaningful baseline);
- The single site visit was conducted during the late wet season, and this means that certain flora and fauna would not have been present or observable due to seasonal constraints;
- Whilst every effort was made to cover as much of the PAOI as possible, representative sampling was completed, and by its nature it is possible that some plant and animal species that are present within the PAOI were not recorded during the field investigations;
- This report must be considered in conjunction with the accompanying freshwater report (TBC, 2024); and
- The GPS used in the assessment has an accuracy of 5 m and consequently any spatial features may be offset by up to 5 m.

1.5 Legislative Framework

In line with the protocol for the specialist assessment and minimum report content requirements for environmental impacts on terrestrial biodiversity, as per Government Notice 320 published in terms of NEMA, dated 20 March 2020: “Procedures for the Assessment and Minimum Criteria for Reporting on

Identified Environmental Themes in terms of Sections 24(5)(a) and (h) and 44 of the National Environmental Management Act, 1998, when applying for Environmental Authorisation" – section 3, subsection 1:

- An applicant intending to undertake an activity identified in the scope of the protocol, on a site identified on the screening tool as being of 'Very High' sensitivity for terrestrial biodiversity, must submit a Terrestrial Biodiversity Specialist Assessment; however
- Where the information gathered from the site sensitivity verification differs from the designation of 'Very High' terrestrial biodiversity sensitivity on the screening tool and it is found to be of a 'Low' sensitivity, then a Terrestrial Biodiversity Compliance Statement must be submitted.

The information obtained from a site sensitivity verification, which involved both a desktop assessment as well as a field survey, confirmed that the proposed PAOI is of a 'Low' sensitivity. Therefore, this report constitutes a Terrestrial Biodiversity Compliance Statement.

As per sections 2 and 3 of the protocol discussed above, a Terrestrial Biodiversity Compliance Statement must contain the information as presented in Table 1-1 below.

Table 1-1 Terrestrial Biodiversity Compliance Statement information requirements as per the relevant protocol, including the location of the information within this report

Information to be Included (as per GN 320, 20 March 2020)	Report Section
Methodology used to undertake the site assessment and survey, and prepare the compliance statement, including relevant equipment and modelling used	7.1
Description of the assumptions and any uncertainties or gaps in knowledge or data	1.4
A baseline profile description of biodiversity and ecosystems of the site	2.1
Site sensitivity verification: Desktop Analysis using satellite imagery and available information	3.1
A statement on the duration, date and season of the site inspection	3.2
Site sensitivity verification: Onsite inspection, include a description of current land use and vegetation found on-site	3.2
Site sensitivity verification: Photographs/evidence of environmental sensitivity	3.2
Screening tool confirmation/dispute: The assessment must verify the "low" sensitivity of the site, in terms of plant, animal, and terrestrial biodiversity themes	3.4.2
Proposed impact management outcomes or monitoring requirements for inclusion in the EMPr	4
Indicate whether or not the proposed development will have any impact on the terrestrial environment, animals and/or plants	5
A signed statement of independence by the specialist	7.3
Specialist details, including a CV	7.4

A signed copy of the compliance statement must be appended to the Basic Assessment Report or Environmental Impact Assessment Report.

2 Fieldwork

2.1 Biodiversity Field Assessment

A single season field survey was undertaken on the 17th of April 2024, which constitutes a late wet season survey, to determine the presence of any local SCC and to achieve the delineation of local habitat types and their associated sensitivities. These data were further supplemented with data from a survey conducted for the same area in July 2022. Effort was made to cover all the different habitat types within the PAOI, within the limits of time, access and security. This site visit is considered sufficient for the project (Figure 2-1).

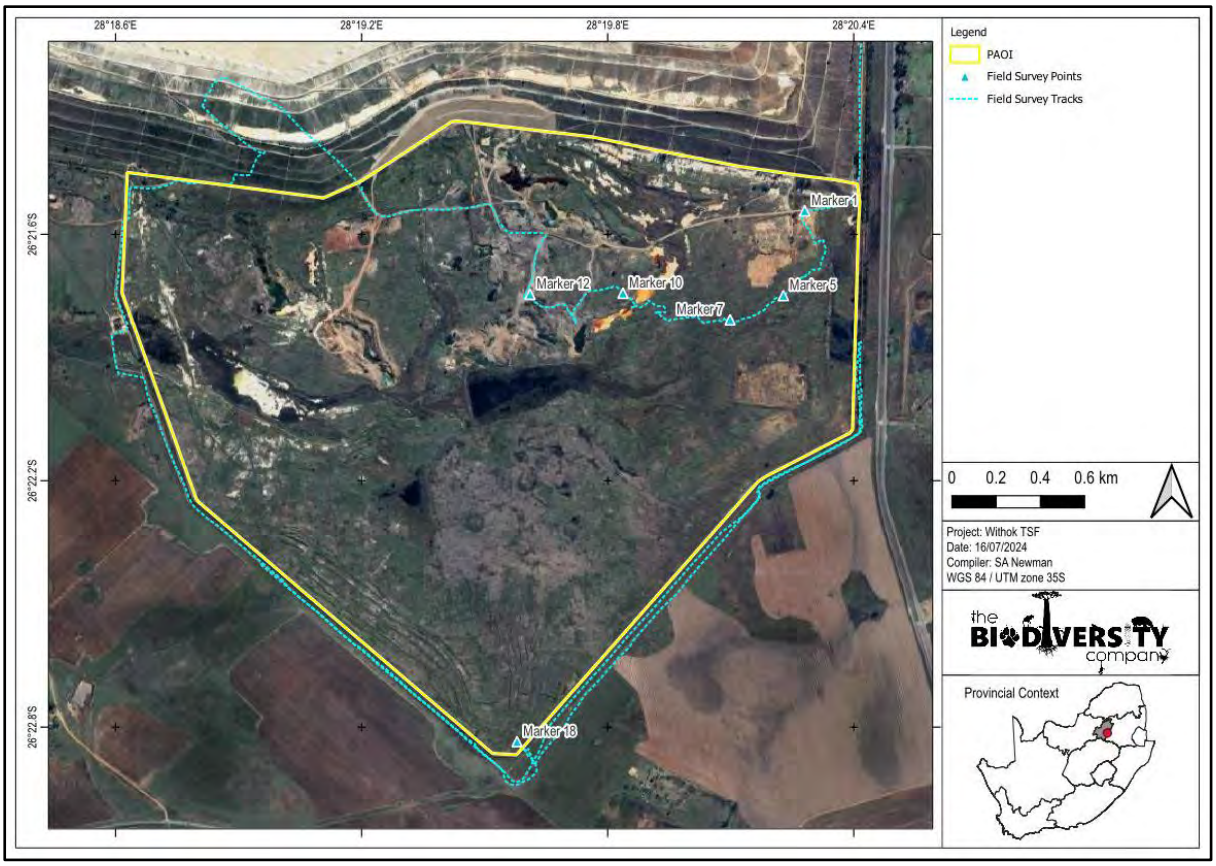


Figure 2-1 Map illustrating the field tracks of the field survey

3 Results & Discussion

3.1 Ecologically Important Landscape Features

Table 3-1 below has been produced as a result of the spatial data collected and analysed as provided by relevant sources. It presents a summative breakdown of the ecological boundaries considered and the associated relevance that each has to the region or PAOI.

Table 3-1 Summary of relevance of the proposed project to ecologically important landscape features

Desktop Information Considered	Relevance	Reasoning
Ecosystem Threat Status	Relevant	Overlaps with an 'Endangered' and 'Vulnerable' Ecosystem (RLE, 2021)
Ecosystem Protection Level	Relevant	Overlaps with a 'Not Protected' and 'Poorly Protected' Ecosystem
Provincial Conservation Plan	Relevant	Overlaps with an Ecological Support Area
SAPAD & SACAD	Relevant	Occurs within 5 km of the Andros Private Nature Reserve (1.5 km) and Avalon Private Nature Reserve (0.16 km)
Gauteng Ridges	Relevant	Overlaps with a Class 4 Gauteng Ridge
National Protected Areas Expansion Strategy	Irrelevant	Does not overlap with any relevant areas (NPAES, 2018)
Important Bird & Biodiversity Areas (IBA)	Relevant	Occurs within 10 km of the Suikerbosrand Nature Reserve IBA (6.3 km)
South African Inventory of Inland Aquatic Ecosystems (SAIIAE)	Relevant	PAOI 500 m regulated area overlaps with a 'Critically Endangered' wetland
National Freshwater Priority Area	Relevant	PAOI and its 500 m regulated area overlap with 'Non-priority' wetlands
Strategic Water Source Area (SWSA)	Irrelevant	Does not overlap with any relevant areas

3.2 Biodiversity Field Survey

The following sections discuss the results from the field survey that was conducted for the proposed project, which was undertaken on the 17th of April 2024. Each sample point is described in Table 3-2.

Table 3-2 Sensitivity summary of the survey points and habitat types delineated within the PAOI

Survey Point	Description	SEI	Photographs
Site GPS Reference: Marker 1 Date: 17/04/2024 GPS Coordinates: 26°21'32.58"S 28°20'16.88"E	Modified Grassland Made up of grassland habitat that has not been adequately rehabilitated back to a functional state. Evidence of tailings material and large areas of bare ground. No fauna or flora SCC observed, and none expected for the habitat unit.	Low	 
Site GPS Reference: Marker 3 Date: 17/04/2024 GPS Coordinates: 26°21'36.77"S 28°20'19.52"E	Degraded Grassland Made up of secondary grassland habitat that has not been adequately rehabilitated back to a natural state. Evidence of anthropogenic disturbance present. Some potential for provincially protected flora species to occur. No fauna or flora SCC observed, and none expected for the habitat unit.	Low	 

Survey Point	Description	SEI	Photographs
Site GPS Reference: Marker 5 Date: 17/04/2024 GPS Coordinates: 26°21'44.97"S 28°20'13.75"E	Water Resource Made up of wetland habitat dominated by hydrophytes. No fauna or flora SCC observed, and none expected for the habitat unit. More information regarding this habitat unit can be found in the accompanying freshwater assessment (TBC, 2024).	Medium	 
Site GPS Reference: Marker 7 Date: 17/04/2024 GPS Coordinates: 26°21'48.51"S 28°20'5.95"E	Degraded Grassland Made up of secondary grassland habitat that has not been adequately rehabilitated back to a natural state. Evidence of anthropogenic disturbance present, as well as areas of bare ground. Some potential for provincially protected flora species to occur. No fauna or flora SCC observed, and none expected for the habitat unit.	Low	 
Site GPS Reference: Marker 10 Date: 17/04/2024 GPS Coordinates: 26°21'44.62"S 28°19'50.27"E	Artificial Water Resource Characterised by an artificial dam surrounded by modified grassland habitat. Large areas of bare ground present. No fauna or flora SCC observed, and none expected for the habitat unit. More information regarding this habitat unit can be found in the accompanying freshwater assessment (TBC, 2024).	Low	

Survey Point	Description	SEI	Photographs
			
Site GPS Reference: Marker 12 Date: 17/04/2024 GPS Coordinates: 26°21'44.78"S 28°19'36.67"E	Modified Grassland Made up of grassland habitat that has not been adequately rehabilitated back to a functional state. Evidence of tailings material and large areas of bare ground. No fauna or flora SCC observed, and none expected for the habitat unit.	Low	 
Site GPS Reference: Marker 18 Date: 17/04/2024 GPS Coordinates: 26°22'50.16"S 28°19'34.76"E	Modified Grassland Made up of grassland habitat that has not been adequately rehabilitated back to a functional state. Evidence of tailings material and large areas of bare ground. Evidence of common mammal species. No fauna or flora SCC observed, and none expected for the habitat unit.	Low	 

3.3 Habitat Assessment

Four (4) main habitat types were identified across the PAOI and include:

- Degraded Grassland;
- Modified Grassland;
- Water Resource; and
- Artificial Water Resource.

The habitat units for the PAOI can be seen delineated in Figure 3-1 and descriptions of the habitat units can be found in Table 3-3.

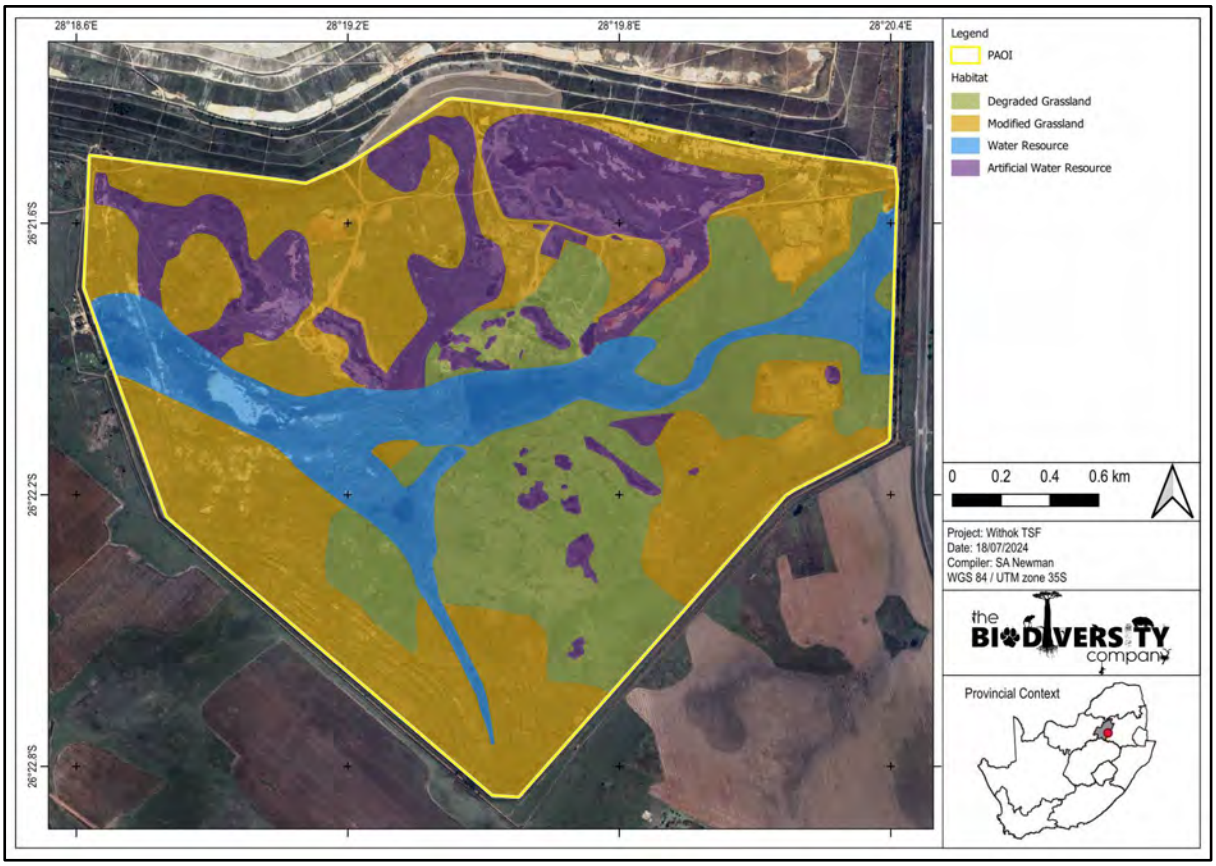


Figure 3-1 Habitats identified within the PAOI

Table 3-3 Table providing descriptions of the habitat types delineated for the PAOI

Habitat	Description and Condition
Degraded Grassland	This habitat unit is characterised by secondary growth grassland habitat that has not fully recovered from historical clearing due to anthropogenic activities, such as human and vehicle ingress, invasions by alien and invasive plants, overgrazing by livestock and the edge effects associated with the nearby mining activities and the adjacent TSF, as well as inadequate rehabilitation procedures. Due to the high levels of disturbance, this habitat never regained full ecological function and is associated with high numbers of alien and invasive plants, such as, *Datura stramonium, Verbena bonariensis, V. brasiliensis, Bidens Pilosa, Tagetes minuta, Erigeron bonariensis, Acacia mearnsii* and *Eucalyptus camaldulensis*. Some sections of this habitat unit are in better condition than others, particularly those bordering on the water resource habitat, with good potential for rehabilitation back to an ecologically stable state. The areas of the site that overlap with the ESA are still representative as such and with active rehabilitation, have the potential to function as a valuable ecological corridor. Dominant indigenous species include, *Melinis repens, Themeda triandra, Cymbopogon pospischilii, Hyparrhenia hirta, Paspalum dilatatum*, *Cynodon dactylon*, *Aristida congesta* and *Seriphium plumosum.* Additional common grassland species associated with disturbance and secondary growth are expected, as well as some provincially protected species, particularly geophytes. No fauna or flora SCC were observed, and none are expected to be resident in the PAOI. Some fauna SCC may make use of the PAOI for foraging and as a movement corridor.
Modified Grassland	This habitat unit is characterised by secondary growth grassland habitat that has not recovered as well from historical clearing as the degraded grassland due to inadequate rehabilitation procedures, and still contains areas of visible tailings material from the previous land use as a TSF in 1996, as well as tailings material leaching from the adjacent TSF. Anthropogenic impacts are more severe here and include, human and vehicle ingress, invasions by alien and invasive plants, overgrazing by livestock and the edge effects associated with the nearby mining activities and the adjacent TSF. Due to the high levels of disturbance, this habitat never regained full ecological function and is associated with high numbers of alien and invasive plants, such as, *Datura stramonium, Verbena bonariensis, V. brasiliensis, Bidens Pilosa, Tagetes minuta, Erigeron bonariensis, Acacia mearnsii* and *Eucalyptus camaldulensis*, as well as areas of bare ground associated with tailings material. Anthropogenic activity has substantially modified this area's primary ecological functions and species composition. Dominant indigenous species include, *Cymbopogon pospischilii, Hyparrhenia hirta, Paspalum dilatatum*, *Cynodon dactylon* and *Gomphocarpus fruticosus.* Additional common grassland species associated with disturbance and secondary growth are expected, as well as some provincially protected species, particularly geophytes. No fauna or flora SCC were observed, and none are expected to be resident in the PAOI. Some fauna SCC may make use of the PAOI for foraging and as a movement corridor.
Water Resource	This is a non-terrestrial habitat made up of wetlands and drainage features within the PAOI. This habitat unit is associated with hydrophytes, such as *Phragmites australis*, as well as high numbers of alien plant species, such as, *Arundo donax* and *Verbena brasiliensis.* No fauna or flora SCC were observed, and none are expected to be resident in the PAOI. Some fauna SCC may make use of the PAOI for foraging and as a movement corridor. Additional information regarding this habitat unit may be found in the accompanying freshwater assessment (TBC, 2024).

Habitat	Description and Condition
Artificial Water Resource	This is a non-terrestrial habitat made up of artificial wetlands and dams within the PAOI. This habitat unit is associated with hydrophytes, such as *Phragmites australis*, as well as high numbers of alien plant species, such as, *Arundo donax* and *Verbena brasiliensis.* No fauna or flora SCC were observed, and none are expected to be resident in the PAOI. Some fauna SCC may make use of the PAOI for foraging and as a movement corridor. Additional information regarding this habitat unit may be found in the accompanying freshwater assessment (TBC, 2024).

3.4 Site Ecological Importance

Based on the criteria provided in Appendix B of this report, all habitats within the PAOI were assigned a sensitivity category, i.e., a SEI category. The PAOI was categorised as possessing habitats with areas ranging from 'Low' to 'Medium' SEI (Table 3-3 and Figure 3-5). This indicates that the findings of this assessment are contrary to the Screening Tool with respect to the Combined Terrestrial Biodiversity Theme sensitivity.

Table 3-4 Summary of habitat types delineated within the PAOI

Habitat Type	Conservation Importance	Functional Integrity	Biodiversity Importance	Receptor Resilience	Site Ecological Importance Guidelines
Degraded Grassland	Low	Low	Low	Medium	Low
	No confirmed or highly likely populations of SCC	Almost no habitat connectivity but migrations still possible across some modified or degraded natural habitat		Will recover slowly (~ more than 10 years) to restore > 75% of the original species composition and functionality of the receptor functionality	Minimisation and restoration mitigation – development activities of medium to high impact acceptable followed by appropriate restoration activities.
Modified Grassland	Low	Low	Low	Medium	Low
	< 50% of receptor contains natural habitat with limited potential to support SCC.	Almost no habitat connectivity but migrations still possible across some modified or degraded natural habitat		Will recover slowly (~ more than 10 years) to restore > 75% of the original species composition and functionality of the receptor functionality	Minimisation and restoration mitigation – development activities of medium to high impact acceptable followed by appropriate restoration activities.
Water Resource	Low	Medium	Low	Low	Medium
	No confirmed or highly likely populations of SCC	Mostly minor current negative ecological impacts, with some major impacts and a few signs of minor past disturbance		Habitat that is unlikely to be able to recover fully after a relatively long period: > 15 years required to restore ~ less than 50% of the original species composition and functionality of the receptor functionality	Minimisation and restoration mitigation – development activities of medium impact acceptable followed by appropriate restoration activities.
Artificial Water Resource	Low	Low	Low	Medium	Low
	No confirmed or highly likely populations of SCC	Several minor and major current negative ecological impacts.		Will recover slowly (~ more than 10 years) to restore > 75% of the original species composition and functionality of the receptor functionality	Minimisation and restoration mitigation – development activities of medium to high impact acceptable followed by appropriate restoration activities.

3.4.1 Desktop Ecological Sensitivity

The following is deduced from the National Web-based Environmental Screening Tool Regulation 16(1)(v) of the Environmental Impact Assessment Regulations 2014, as amended):

- Terrestrial Biodiversity Theme sensitivity is Very High for the proposed development area, due to it overlapping with Terrestrial CBA 1, CBA 2, ESA 1, ESA 2, NPAES, Endangered Tsakane Clay Grassland ecosystem, Vulnerable Soweto Highveld Grassland ecosystem and Avalon Private Nature Reserve (Figure 3-2);

- Plant Species Theme sensitivity is Medium for the proposed development area due to the possible presence of a number of medium sensitivity plant species (Figure 3-3); and

- Animal Species Theme sensitivity is High for the proposed development area due to the possible presence of one high sensitivity species and a number of medium sensitivity species (Figure 3-4).

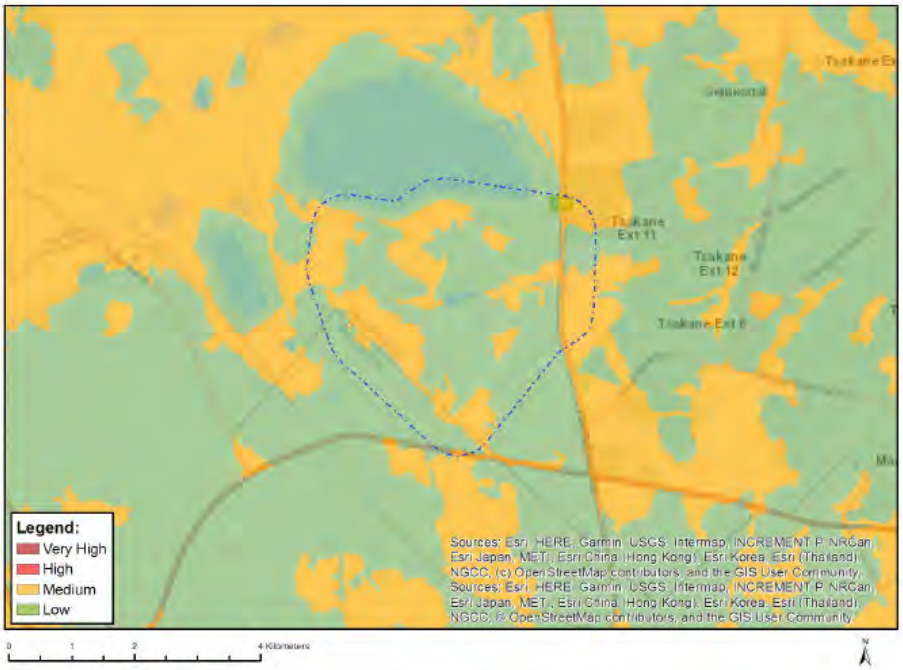


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
Very High	Avalon Private Nature Reserve
Very High	CBA 1
Very High	ESA 1
Very High	ESA 2
Very High	CBA 2
Very High	National Protected Area Expansion Strategy (NPAES)
Very High	VU_Soweto Highveld Grassland
Very High	EN_Tsakane Clay Grassland

Figure 3-2 Terrestrial Biodiversity Theme Sensitivity



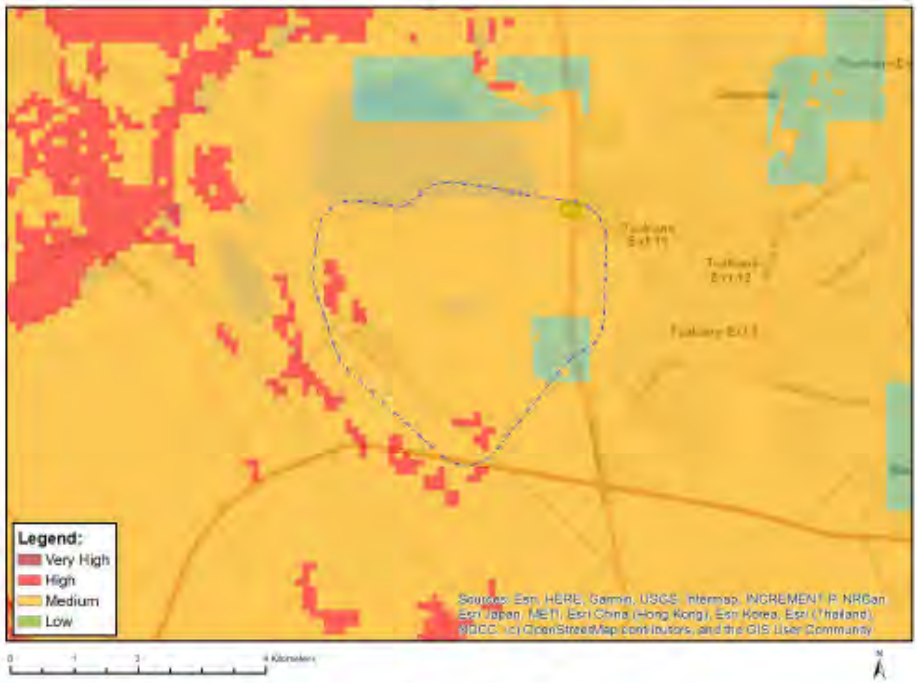
Where only a sensitive plant unique number or sensitive animal unique number is provided in the screening report and an assessment is required, the environmental assessment practitioner (EAP) or specialist is required to email SANBI at eiadatarequests@sanbi.org.za listing all sensitive species with their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

Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low Sensitivity
Medium	Sensitive species 1252
Medium	Khadia beswickii
Medium	Cineraria longipes
Medium	Sensitive species 691
Medium	Sensitive species 1248

Figure 3-3 Plant Species Theme Sensitivity



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

Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
	X		

Sensitivity Features:

Sensitivity	Feature(s)
High	Aves-Circus ranivorus
Low	Subject to confirmation
Medium	Aves-Circus ranivorus
Medium	Aves-Hydroprogne caspia
Medium	Insecta-Aloeides dentatis dentatis
Medium	Insecta-Lepidochrysops procera
Medium	Mammalia-Chrysospalax villosus
Medium	Mammalia-Crocidura maquassiensis
Medium	Mammalia-Dasymys robertsii
Medium	Mammalia-Hydrictis maculicollis

Figure 3-4 Animal Species Theme Sensitivity

3.4.2 Screening Tool Comparison

The allocated sensitivities for each of the relevant themes are either disputed or validated for the overall PAOI in Table 3-5 below. A summative explanation for each result is provided as relevant. The specialist-assigned sensitivity ratings are based largely on the SEI process followed in the previous section, and consideration is given to any observed or likely presence of SCC species. A map illustrating the overall SEI allocations for the PAOI can be seen in Figure 3-5

Table 3-5 Summary of the screening tool vs specialist assigned sensitivities

Screening Tool Theme	Screening Tool	Specialist	Tool Validated or Disputed by Specialist - Reasoning
Animal Theme	High	Low	Disputed – Habitat exists in a largely degraded or modified state with high levels of anthropogenic disturbance, particularly those associated with the adjacent TSF, as well as historical land clearing. No SCC observed and unlikely to be resident, although some may use the habitats on site for foraging and as a movement corridor.
Plant Theme	Medium	Low	Disputed – Habitat exists in a largely degraded or modified state with high levels of anthropogenic disturbance, particularly those associated with the adjacent TSF. High numbers of alien and invasive plants. No SCC observed and unlikely to occur.
Terrestrial Theme	Very High	Low	Disputed – Habitat exists in a largely degraded or modified state with high levels of anthropogenic disturbance, particularly those associated with the adjacent TSF, and has therefore lost much of its ecosystem functionality. Habitat will not recover without human intervention and will continue to degrade over time without rehabilitation. Rehabilitation efforts thus far have been inadequate to return the ecosystem to a functional state.

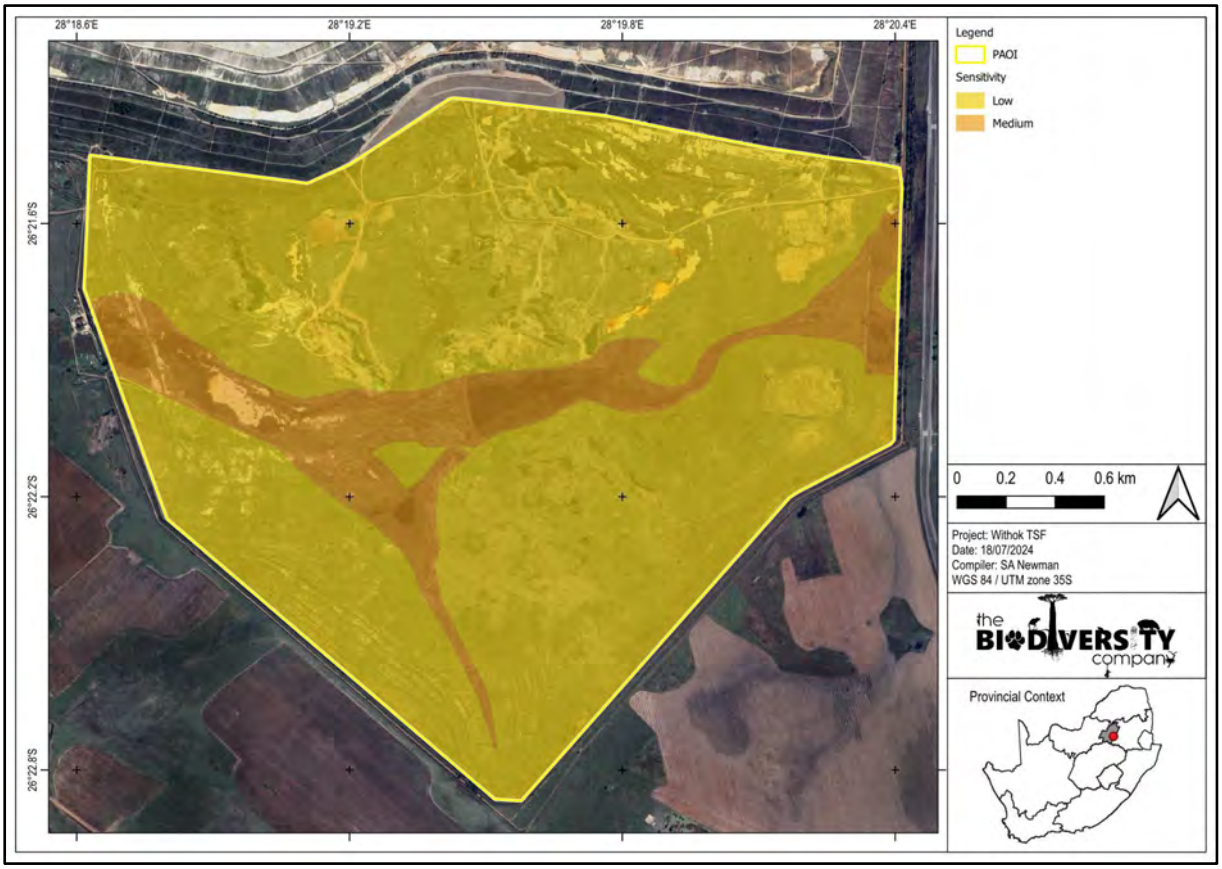


Figure 3-5 Map illustrating the site ecological importance for the PAOI

4 Impact Management and Mitigation Plan

The aim of the management outcomes is to present mitigation actions in such a way that they can be incorporated into the Environmental Management Programme (EMPr), and possible biodiversity management programme, for the project, which should in turn allow for a more successful implementation and auditing of the mitigations and monitoring guidelines. Table 4-1 presents the recommended mitigation measures and the respective time frames, targets, and performance indicators relative to the terrestrial assessment.

The focus of mitigation measures is to reduce the significance of the likely impacts associated with the development, and thereby:

- Prevent the further loss and fragmentation of indigenous vegetation communities within the ecosystem in the vicinity of the PAOI;
- Reduce the negative fragmentation effects of the development and enable the safe movement of fauna species;
- Prevent the direct and indirect loss and disturbance of flora and fauna species and communities, including the negative effects associated with the introduction and proliferation of alien and invasive species; and
- Adequately follow the guidelines for interpreting the Site Ecological Importance ratings assigned to the PAOI.

Table 4-1 Project specific mitigation measures including requirements for timeframes, roles and responsibilities

Management outcome: Vegetation and Habitats				
Impact Management Actions	Implementation		Monitoring	
	Phase	Responsible Party	Aspect	Frequency
Laydown and construction preparation activities (such as cement mixing, temporary toilets, etc.) must be limited to already modified areas and should take up the smallest footprint possible.	Construction Phase	Project manager, Environmental Officer	Development footprint	Ongoing
Areas classified as Medium sensitivity (water resource habitat) must have mitigations applied as stipulated in the accompanying freshwater assessment.	Life of operation	Project Manager	Medium sensitivity areas	Ongoing
Develop post-mining environments, in conjunction with regional development plans; and the recreation of habitats, where possible; or structure altered landscapes to be compatible with regional habitats.	Life of operation	Project manager, Environmental Officer	Development footprint	Ongoing
It is recommended that areas to be developed/disturbed be specifically demarcated so that during the construction/activity phase, only the demarcated areas be impacted upon.	Construction Phase	Project manager, Environmental Officer	Development footprint	Ongoing
Areas of indigenous vegetation, even secondary communities outside of the direct project footprint, should not be fragmented or disturbed further if possible.	Construction Phase	Project manager, Environmental Officer	Development footprint	Ongoing
All vehicles and personnel must make use of existing roads and walking paths as far as possible, especially construction/operational vehicles.	Construction Phase	Project manager, Environmental Officer	Development footprint	Ongoing
The clearing of vegetation must be minimised where possible. All activities must be restricted to within the authorised areas.	Life of operation	Project manager, Environmental Officer	Areas of indigenous vegetation	Ongoing
All individuals of any protected plant species that are present need a relocation or destruction permit in order to be removed or destroyed due to the development. High-visibility flags must be placed near any threatened/protected plants in order to avoid any damage or destruction of the species. If left undisturbed, the sensitivity and importance of these species needs to be part of the environmental awareness program. If infrastructure, development areas and routes occur where protected plants cannot be avoided, the protected plants should be removed from the soil and relocated/ re-planted in similar habitats where they should be able to resprout and flourish again. All protected and red-data plants should be relocated, and as many other geophytic species as possible.	Life of operation	Project manager, Environmental Officer	Protected Tree/Plant species	Ongoing
A site walkthrough must be conducted by a suitably qualified specialist prior to the construction phase. The site walkthrough must be conducted during the summer season between October and March. Priority must be the identification of any listed flora species, particularly provincially protected species.	Planning Phase, Pre-Construction	Project manager, Environmental Officer & Contractor	Plant & animal species	Once off
Any observed protected plants must be clearly demarcated prior to the commencement of site clearing. If construction activities are likely to affect any protected plants these individuals	Planning Phase	Environmental Officer	Protected plants and SCC	During phase

must be relocated as part of a plant rescue and protection plan, and a permit must be obtained before doing so, or destruction permits must be obtained.				
Materials may not be stored for extended periods of time and must be removed from the PAOI once the construction phase has been concluded. No permanent construction phase structures should be permitted. Construction buildings should preferably be prefabricated or constructed of re-usable/recyclable materials. No storage of vehicles or equipment will be allowed outside of the designated laydown areas.	Construction and Operational Phase	Environmental Officer, Design Engineer, and Contractor	Laydown areas	Ongoing
Areas that are denuded during construction need to be re-vegetated with indigenous vegetation according to a habitat rehabilitation plan, to prevent erosion during flood and wind events and to promote the regeneration of functional habitat. This will also reduce the likelihood of encroachment by alien invasive plant species. All grazing mammals must be kept out of the areas that have recently been re-planted.	Operational phase	Environmental Officer & Contractor	Assess the state of rehabilitation and encroachment of alien vegetation	Quarterly for up to two years after the closure
A habitat rehabilitation plan must be implemented, and areas of bare ground must be revegetated with species indigenous to the region. This must also apply to areas below the panels.	Life of Operation	Project manager, Environmental Officer	Rehabilitation	Ongoing
A hydrocarbon spill management plan must be put in place to ensure that should there be any chemical spill out or over that it does not run into the surrounding areas. A TSF operational plan must be put in place to avoid tailings spillage. The Contractor shall be in possession of an emergency spill kit that must always be complete and available on site. • Drip trays or any form of oil absorbent material must be placed underneath vehicles/machinery and equipment when not in use. • No servicing of equipment on site unless necessary. • All contaminated soil / yard stone shall be treated in situ or removed and be placed in containers. • Appropriately contain any generator diesel storage tanks, machinery spills (e.g., accidental spills of hydrocarbons oils, diesel etc.) in such a way as to prevent them from leaking and entering the environment. • Construction activities and vehicles could cause spillages of lubricants, fuels and waste material negatively affecting the functioning of the ecosystem. • All vehicles and equipment must be maintained, and all re-fueling and servicing of equipment is to take place in demarcated areas outside of the PAOI.	Life of operation	Environmental Officer & Contractor	Spill events, Vehicles dripping.	Ongoing
It must be made an offence for any staff member to remove any indigenous plant species from the PAOI or bring any alien species in. This is to prevent the spread of exotic or alien species or the illegal collection of plants.	Life of operation	Project manager, Environmental Officer	Any instances	Ongoing

All construction waste must be removed from site at the closure of the construction phase.	Construction phase	Environmental Officer & Contractor	Construction waste	During Phase

Storm Water run-off & Discharge Water Quality monitoring • Incorporate green /soft engineering storm water measures. Avoid unnecessary vegetation clearing and avoid preferential surface flow paths; • Cut-off trenches must be incorporated into the design to decrease contamination of watercourses via heavy metals. • Contain wastewater in a PCD. Contaminated water must not be discharged into the watercourses; • Clean and dirty water must be separated. This water should be looked at for treatment and then re-introduced to mitigate losses to the catchment water hydro-dynamics; • All released water must be within DWAF (1996) water quality standards for aquatic ecosystems, and discharge must be managed to avoid scouring and erosion of the receiving systems; • Keep the surface & sub-surface water and storm water that may run off from the dumps away from the low lying areas, such as wetlands, as well as the surrounding areas. Prevention from leaving the PAOI in an uncontrolled manner; • Implement Storm Water Run-Off & Discharge Water Quality monitoring; • Storage of potential contaminants in bunded areas; and • To at least minimise impacts to water quality, a treatment strategy is required, and the Groundwater report needs to be considered.	Life of operation	Environmental Officer & Design Engineer	Water Quality	Monthly

Management outcome: Fauna				
Impact Management Actions	Implementation		Monitoring	
	Phase	Responsible Party	Aspect	Frequency
A qualified environmental control officer must be on site when activities begin. A site walk through must be performed by a suitably qualified ecologist prior to any activities taking place and any SSC or protected species should be noted. In situations where these species are observed and must be removed, the proponent may only do so after the required permission/permits have been obtained in accordance with national and provincial legislation. In the abovementioned situation the development and implementation of a search, rescue and recovery program is suggested for the protection of these species. Should animals not move out of the area on their own, relevant specialists must be contacted to advise on how the species can be relocated.	Construction Phase	Environmental Officer, Contractor	Presence of any floral or faunal SCC	During phase

Clearing and disturbance activities must be conducted in a progressive linear manner, always outwards and away from the centre of the PAOI and over several days, so as to provide an easy escape route for all small mammals and herpetofauna.	Construction Phase	Environmental Officer & Contractor	Progressive land clearing operations and the movement of fauna	Ongoing
The areas to be disturbed must be specifically and responsibly demarcated to prevent the movement of staff or any individual into the surrounding environments, signs must be put up to enforce this.	Construction/Operational Phase	Project manager, Environmental Officer	Infringement into these areas	Ongoing
The duration of the activities should be minimised to as short a term as possible, to reduce the period of disturbance on fauna.	Construction	Project manager, Environmental Officer & Design Engineer	Construction/Closure Phase	Ongoing
Noise must be kept to an absolute minimum during the evenings and at night to minimise all possible disturbances to reptile species and nocturnal mammals.	Construction/Operational Phase	Environmental Officer	Noise levels	Ongoing
No trapping, killing, or poisoning of any wildlife is to be allowed and signs must be put up to enforce this. Monitoring must take place in this regard.	Life of operation	Environmental Officer	Evidence of trapping etc	Ongoing
Outside lighting should be designed and limited to minimise impacts on fauna. All outside lighting should be directed away from any sensitive areas. Fluorescent and mercury vapor lighting should be avoided, and sodium vapor (green/red) lights should be used wherever possible.	Construction/Operational Phase	Project manager, Environmental Officer & Design Engineer	Light pollution and period of light	Ongoing
All construction and maintenance motor vehicle operators should undergo an environmental induction that includes instruction on the need to comply with speed limits, to respect all forms of wildlife. Speed limits must be enforced to ensure that road killings and erosion is limited.	Life of operation	Health and Safety Officer	Compliance to the training	Ongoing
Schedule activities and operations during least sensitive periods, to avoid migration, nesting, and breeding seasons. In this case, activities should take place during the day.	Life of operation	Project manager, Environmental Officer & Design Engineer	Activities should take place during the day	Ongoing
Any holes/deep excavations must be dug in a progressive manner and shouldn't be left open overnight. Should any holes remain open overnight they must be properly covered temporarily to ensure that no small fauna species fall in. Holes must be subsequently inspected for fauna prior to backfilling.	Planning and Construction	Environmental Officer & Contractor, Engineer	Presence of trapped animals and open holes	Ongoing
If fencing is required: wildlife-permeable fencing with holes large enough for mongoose and other smaller mammals should be installed, the holes must not be placed in the fence where it is next to a major road as this will increase road killings in the area.	Planning and construction	Environmental Officer & Contractor, Engineer	Fauna movement corridor	Ongoing

Management outcome: Alien Species

Impact Management Actions	Implementation		Monitoring	
	Phase	Responsible Party	Phase	Responsible Party
An Alien Invasive Plant (AIP) Management Plan must be compiled and implemented. This should regularly be updated to reflect the annual changed in AIP composition.	Life of operation	Project manager, Environmental	Manage and assess presence and encroachment of alien vegetation	Twice a year

		Officer & Contractor		
The footprint area of the construction should be kept to a minimum. The footprint area must be clearly demarcated to avoid unnecessary disturbances to adjacent areas. Footprints of the roads must be kept to prescribed widths.	Construction/Operational Phase	Project manager, Environmental Officer & Contractor	Footprint Area	Life of operation
A pest control plan must be put in place and implemented; it is imperative that poisons not be used to control pests.	Life of operation	Environmental Officer & Health and Safety Officer	Evidence or presence of pests	Life of operation

Management outcome: Dust

Impact Management Actions	Implementation		Monitoring	
	Phase	Responsible Party	Phase	Responsible Party
Dust-reducing mitigation measures must be put in place and must be strictly adhered to. This includes the wetting of exposed soft soil surfaces. No non-environmentally friendly suppressants may be used as this could result in the pollution of water sources.	Construction phase	Contractor	Dustfall	Dust monitoring program.

Management outcome: Waste Management

Impact Management Actions	Implementation		Monitoring	
	Phase	Responsible Party	Phase	Responsible Party
Waste management must be a priority and all waste must be collected and stored effectively and responsibly according to a site-specific waste management plan. Dangerous waste such as metal wires and glass must only be stored in fully sealed and secure containers, before being moved off site as soon as possible.	Life of operation	Environmental Officer & Contractor	Waste Removal	Weekly
Litter, spills, fuels, chemical and human waste in and around the PAOI must be minimised and controlled according to the waste management plan.	Construction/Closure Phase	Environmental Officer & Health and Safety Officer	Presence of Waste	Daily
Cement mixing may not be performed on the ground. It is recommended that only closed side drum or pan type concrete mixers be utilised. Any spills must be immediately contained and isolated from the natural environment, before being removed from site.	Construction Phase	Environmental Officer & Contractor	Cement mixing and spills	Every occurrence
Toilets at the recommended Health and Safety standards must be provided. These should be emptied regularly and once no longer required, they must be pumped dry to prevent leakage into the surrounding environment and removed from site.	Life of operation	Environmental Officer & Health and Safety Officer	Number of toilets per staff member. Waste levels	Daily
The Contractor should supply sealable and properly marked domestic waste collection bins and all solid waste collected shall be disposed of at a licensed disposal facility within every 10 days at least.	Life of operation	Environmental Officer & Health and Safety Officer	Availability of bins and the collection of the waste	Ongoing
Where a registered disposal facility is not available close to the PAOI, the Contractor shall provide a method statement with regards to waste management. Under no circumstances may domestic waste be burned on site or buried on open pits.	Life of operation	Environmental Officer, Contractor & Health and Safety Officer	Collection/handling of the waste	Ongoing
Refuse bins will be responsibly emptied and secured. Temporary storage of domestic waste shall be in covered and secured waste skips.	Life of operation	Environmental Officer, Contractor &	Management of bins and collection of waste	Ongoing, every 10 days

Maximum domestic waste storage period will be 10 days.	Health and Safety Officer	

Management outcome: Environmental Awareness Training				
Impact Management Actions	Implementation		Monitoring	
	Phase	Responsible Party	Phase	Responsible Party
All personnel and contractors are to undergo Environmental Awareness Training. A signed register of attendance must be kept for proof. Discussions are required on sensitive environmental receptors within the PAOI to inform contractors and site staff of the presence of protected species, their identification, conservation status and importance, biology, habitat requirements and management requirements in line with the Environmental Authorisation and within the EMPr. Contractors and employees must all undergo the induction and must be made aware of any sensitive areas to be avoided (water resources).	Pre-construction phase	Health and Safety Officer, Environmental Officer	Compliance to the training	Ongoing

Management outcome: Erosion				
Impact Management Actions	Implementation		Monitoring	
	Phase	Responsible Party	Phase	Responsible Party
Speed limits must be put in place to reduce erosion. Soil surfaces must be wetted as necessary to reduce the dust generated by the project activities. Speed bumps and signs must be erected to enforce slow speeds.	Life of operation	Project manager, Environmental Officer	Water Runoff from road surfaces	Ongoing
Only existing access routes and walking paths may be made use of.	Life of operation	Project manager, Environmental Officer	Routes used within the area	Ongoing
Areas that are denuded during construction need to be re-vegetated with indigenous vegetation to prevent erosion during flood events etc.	Life of operation	Project manager, Environmental Officer	Re-establishment of indigenous vegetation	Progressively
A stormwater management plan must be compiled and implemented if necessary.	Life of operation	Project manager, Environmental Officer	Management plan	Before construction phase: Ongoing
Precautions must be taken against the erosion damage that would be caused by unplanned pipe leaks or leaching in general. This involves the installation of leak warning and detection systems, as well as the planting of dense indigenous pioneer grass seeds across all bare earth areas.	Closure Phase/Rehabilitation phase	Environmental Officer & Contractor	Erosion Management and Control/ Leaks	During Phase and Ongoing Monitoring

5 Conclusion

The PAOI exists in a predominantly degraded or modified state owing to inadequate rehabilitation procedures following the TSF closure in 1996. The PAOI has been subjected to various anthropogenic impacts such as, human and vehicle ingress, invasions and infestations by alien and invasive plants, overgrazing by livestock, and the edge effects associated with the nearby mining activities and adjacent TSF. This habitat is unlikely to recover without human intervention and will continue to degrade further without active rehabilitation. It no longer represents viable portions of the Endangered and Vulnerable ecosystems that were once there, however, adequate rehabilitation may achieve this.

Due to the seasonal restraints at the time of this assessment, a site walkdown is recommended prior to any construction activities taking place to identify any protected plant species which may occur on site. These must be marked and relocated to a similar habitat nearby which will not be affected by construction activities. Alternatively, applications for destruction permits must be made.

Completion of the terrestrial biodiversity assessment led to the dispute of the 'Very High' classification for the terrestrial biodiversity theme sensitivity as allocated by the National Environmental Screening Tool. The PAOI is instead assigned an overall terrestrial sensitivity of 'Low'. However, the ESA status is still considered to be relevant, albeit limited, due to it overlapping with water resources and forming a valuable movement corridor between adjacent undeveloped areas.

5.1 Impact Statement

The location, state and size of the ecosystem suggests that it is unlikely that any functional habitat or SCCs will be lost as a result of the impacts arising from the proposed activities, unless in the event of a full tailings failure would which theoretically result in catastrophic loss of biodiversity. However, these assumptions pertain to the terrestrial habitat within the PAOI only and the recommendations and mitigations presented in the accompanying freshwater assessment must be strictly adhered to.

5.2 Specialist Opinion

It is the opinion of the specialist that the proposed development is favourable only if all mitigation measures provided in this and other specialist reports are implemented, as well as the following:

- A site walkdown during the correct flowering season (between October and March) must be conducted for all provincially protected plant species present on site, along with the acquisition of permits for the relocation/destruction of species;
- An alien invasion plant (AIP) management plan must be compiled and implemented; and
- A rehabilitation plan must be compiled and implemented for all areas of the PAOI impacted by the project activities.

6 References

Apps, P. 2000. Smither's Mammals of Southern Africa – A Field Guide. Struik Nature, Cape Town.

Bates, M.F., Branch, W.R., Bauer, A.M., Burger, M., Marais, J., Alexander, G.J & de Villiers, M.S. (Eds). 2014. Atlas and Red List of Reptiles of South Africa, Lesotho and Swaziland. Suricata 1. South African Biodiversity Institute, Pretoria.

Branch, B. 1998. Field Guide to Snakes and Other Reptiles of Southern Africa. Struik Nature, Cape Town.

Department of Forestry, Fisheries and the Environment (DFFE). 2023. SACAD (South Africa Conservation Areas Database) and SAPAD (South Africa Protected Areas Database). http://egis.environment.gov.za.

Department of Forestry, Fisheries and the Environment (DFFE). 2022. National Protected Areas Expansion Strategyhttp://egis.environment.gov.za.

Du Preez, L.H. & Carruthers, V. 2009. A Complete Guide to the Frogs of Southern Africa. Struik Nature, Cape Town.

Fish, L., Mashau, A.C., Moeaha, M.J. & Nembudani, M.T. 2015. Identification Guide to Southern African Grasses: An Identification Manual with Keys, Descriptions, and Distributions. SANBI, Pretoria.

FitzPatrick Institute of African Ornithology. 2023a. MammalMAP Virtual Museum. Accessed at http://vmus.adu.org.za/?vm=MammalMAP

FitzPatrick Institute of African Ornithology. 2023b. ReptileMAP Virtual Museum. Accessed at http://vmus.adu.org.za/?vm=ReptileMAP

FitzPatrick Institute of African Ornithology. 2023c. FrogMAP Virtual Museum. Accessed at http://vmus.adu.org.za/?vm=FrogMAP

Mucina, L. & Rutherford, M.C. (Eds.). 2006. The vegetation of South Africa, Lesotho and Swaziland. Strelizia 19. South African National Biodiversity Institute, Pretoria, South African.

Mucina, L., Rutherford, M.C. & Powrie, L.W. (Eds.). 2007. Vegetation map of South Africa, Lesotho and Swaziland. 1:1 000 000 scale sheet maps. 2nd ed. South African National Biodiversity Institute, Pretoria.

Mucina, L., Scott-Shaw, CR., Rutherford, MC., Camp., KGT., Matthews, WS., Powrie, LW and Hoare, DB. Indian Ocean Coastal Belt. IN Mucina, L. & Rutherford, M.C. (Eds.). 2006. The vegetation of South Africa, Lesotho and Swaziland. Strelizia 19. South African National Biodiversity Institute, Pretoria, South African.

National Biodiversity Assessment spatial data. 2018. http://bgis.sanbi.org/. Accessed January 2022.

Nel JL, Murray KM, Maherry AM, Petersen CP, Roux DJ, Driver A, Hill L, Van Deventer H, Funke N, Swartz ER, Smith-Adao LB, Mbona N, Downsborough L and Nienaber S. 2011. Technical Report for the National Freshwater Ecosystem Priority Areas project. WRC Report No. K5/1801.

NEMBA. 2014. Government Gazette, Volume 584. No 37320. www.gpwonline.co.za. Accessed January 2022.

POSA. 2016. Plants of South Africa - an online checklist. POSA ver. 3.0. http://newposa.sanbi.org/. (Accessed: August 2023).

Raimondo, D., von Staden, L., Foden, W., Victor, J.E., Helme, N.A., Turner, R.C., Kamundi, D.A. and Manyama, P.A. 2009. Red List of South African Plants. Strelitzia 25. South African National Biodiversity Institute, Pretoria.

SANBI. 2022. Red List of South African Plants version 2020. redlist.sanbi.org (Accessed: May 2023)

SANBI-BGIS. 2017. Technical guidelines for CBA Maps: Guidelines for developing a map of Critical Biodiversity Areas & Ecological Support Areas using systematic biodiversity planning.

SAPAD (South Africa Protected Areas Database) and SACAD (South Africa Conservation Areas Database) (2023). http://egis.environment.gov.za

Skinner, J.D. & Chimimba, C.T. 2005. The Mammals of the Southern African Sub-region. Cambridge University Press, Cape Town.

Skowno, A.L. & Monyeki, M.S. 2021. South Africa's Red List of Terrestrial Ecosystems (RLEs). Land, 10, 1048, 1-14.

Skowno, A.L., Raimondo, D.C., Poole, C.J., Fizzotti, B. & Slingsby, J.A. (eds.). 2019. South African National Biodiversity Assessment 2018 Technical Report Volume 1: Terrestrial Realm. South African National Biodiversity Institute, Pretoria.

Stuart, C & Stuart, M. A. 2013. Field guide to the tracks & signs of Southern, Central & East African Wildlife. Penguin Random House, Cape Town.

Stuart, C & Stuart, M. A. 2015. Stuarts' Field Guide to Mammals of Southern Africa including Angola, Zambia & Malawi. Struik Nature, Cape Town.

Taylor A, Cowell C, Drouilly M, Schulze E, Avenant N, Birss C, Child MF. 2016. A conservation assessment of Pelea capreolus. In Child MF, Roxburgh L, Do Linh San E, Raimondo D, Davies-Mostert HT, editors. The Red List of Mammals of South Africa, Swaziland and Lesotho. South African National Biodiversity Institute and Endangered Wildlife Trust, South Africa.

Taylor, M.R., Peacock, F. & Wanless, R.M. (Eds). 2015. The 2015 Eskom Red Data Book of birds of South Africa, Lesotho and Swaziland. BirdLife South Africa, Johannesburg.

Van Deventer H, Smith-Adao L, Collins NB, Grenfell M, Grundling A, Grundling P-L, Impson D, Job N, Lötter M, Ollis D, Petersen C, Scherman P, Sieben E, Snaddon K, Tererai F. and Van der Colff D. 2019. *South African National Biodiversity Assessment 2018: Technical Report.* Volume 2b: Inland Aquatic (Freshwater) Realm. CSIR report number CSIR/NRE/ECOS/IR/2019/0004/A. South African National Biodiversity Institute, Pretoria. http://hdl.handle.net/20.500.12143/6230.

7 Appendix Items

7.1 Appendix A: Methods

7.1.1 Desktop Dataset Assessment

7.1.1.1 Ecologically Important Landscape Features

Existing ecologically relevant data layers were incorporated into a GIS to establish how the proposed development might interact with any ecologically important entities. Emphasis was placed around the following spatial datasets:

- National Biodiversity Assessment 2018 (Skowno *et al,* 2019) - The purpose of the National Biodiversity Assessment (NBA) is to assess the state of South Africa's biodiversity based on best available science, with a view to understanding trends over time and informing policy and decision-making across a range of sectors. The NBA deals with all three components of biodiversity: genes, species and ecosystems; and assesses biodiversity and ecosystems across terrestrial, freshwater, estuarine and marine environments. The two headline indicators assessed in the NBA are:
    - Ecosystem Protection Level – 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. Not Protected, Poorly Protected or Moderately Protected ecosystem types are collectively referred to as under-protected 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). 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 Critically Endangered (CR), 51 Endangered (EN) and 14 are Vulnerable (VU). The remainder are categorised as Least Concern (LC) (SANBI, 2022; Skowno & Monyeki, 2021).

- Protected areas:
    - South Africa Protected Areas Database (SAPAD) and South Africa Conservation Areas Database (SACAD) (DFFE, 2023a) – The South African Protected Areas Database (SAPAD) and South Africa Conservation Areas Database (SACAD) contains spatial data for the conservation of South Africa. It includes spatial and attribute information for both formally protected areas and areas that have less formal protection. The database is updated on a continuous basis and forms the basis for the Register of Protected Areas which is a legislative requirement under the National Environmental Management: Protected Areas Act, Act 57 of 2003.
    - National Protected Areas Expansion Strategy (NPAES) (DFFE, 2022b) – The National Protected Area Expansion Strategy (NPAES) provides spatial information on areas that are suitable for terrestrial ecosystem protection. These focus areas are large, intact

and unfragmented and are therefore, of high importance for biodiversity, climate resilience and freshwater protection.

- Conservation/Biodiversity Sector Plans:

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

  Critical Biodiversity Areas (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.

- Gauteng Ridges

  The quartzite ridges of Gauteng are one of the most important natural assets in this northern province 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, or in the case of certain plant species, are found nowhere else in South Africa or around the world.

  In order to give practical effect to this policy, the Gauteng Department of Agriculture and Rural Development (GDARD) has classified all ridges in Gauteng into one of four classes, based on the existing extent and percentage of area converted by urban development or disturbed by other human activities. According to GDARD (2019), the ridges within Gauteng may be classified as follows:

  - Class 1 Ridges: 5% or less of the ridge area has been transformed by human activity (Approx. 58% of ridges fall within this category);
  - Class 2 Ridges: Between 6 and 34% of the ridge area has been transformed by human activity (Approx. 23% of ridges fall within this category);
  - Class 3 Ridges: Between 35 and 64% of the ridge area has been transformed by human activity (Approx. 8% of ridges fall within this category); and
  - Class 4 Ridges: Over 65% of the ridge area has been transformed by human activity (Approx. 11% of ridges fall within this category).

  The 2019 Ridges Guideline has defined general guidelines that must be followed with regard to the amount of development that should be permitted on different ridges according to their class. GDARD (2019) stipulates that no development is to be permitted on any class 1 ridge, and varying levels of development may be permissible with regards to the higher ridge classes – depending on the impact level of the proposed activity and the corresponding spatial scale. Buffers and permitted developments are as follows (GDARD, 2019):

  - Class 1 Ridges: Only low impact activities with an ecological footprint of 5% or less in the 200 m buffer zone of the ridge will be supported and no development will be permitted in the ridge itself;

- Class 2 Ridges: Development activities and uses that have a high environmental impact on a Class 2 ridge will not be permitted. Low impact development activities, such as tourism facilities, which comprise of an ecological footprint of 5% or less of the property may be supported (the ecological footprint includes all areas directly impacted on by a development activity, including all paved surfaces, landscaping, property access and service provision). Low impact development activities on a ridge will not be supported where it is feasible to undertake the development on a portion of the property abutting the ridge;

- Class 3 Ridges: The guidelines for Class 2 ridges will be applied to areas of the ridge that have not been significantly impacted on by human activity. The guidelines for Class 3 ridges will be applied to areas of the ridge that have been significantly impacted on by human activity; and

- Class 4 Ridges: Further development activities will not be supported in areas of the ridge where the remaining contiguous extent of natural habitat is 4 ha or more.

- Important Bird and Biodiversity Areas (BirdLife South Africa, 2015) – Important Bird and Biodiversity Areas (IBAs) constitute a global network of over 13 500 sites, of which 112 sites are found in South Africa. IBAs are sites of global significance for bird conservation, identified through multi-stakeholder processes using globally standardised, quantitative and scientifically agreed criteria; and

- Freshwater Ecology:

  - Strategic Water Source Areas (SWSAs) (Le Maitre *et al,* 2018) – SWSAs are defined as areas of land that supply a quantity of mean annual surface water runoff in relation to their size and therefore, contribute considerably to the overall water supply of the country. These are key ecological infrastructure assets and the effective protection of surface water SWSAs areas is vital for national security because a lack of water security will compromise national security and human wellbeing.

  - South African Inventory of Inland Aquatic Ecosystems (SAIIAE) (Van Deventer *et al*, 2018) – A South African Inventory of Inland Aquatic Ecosystems (SAIIAE) was established during the National Biodiversity Assessment of 2018. It is a collection of data layers that represent the extent of river and inland wetland ecosystem types as well as pressures on these systems.

  - National Freshwater Ecosystem Priority Area (NFEPA) (Nel *et al.,* 2011) – The NFEPA database provides strategic spatial priorities for conserving the country's freshwater ecosystems and associated biodiversity as well as supporting sustainable use of water resources.

7.2 Appendix B: Terrestrial Site Ecological Importance

The different habitat types within the PAOI were delineated and identified based on observations made during the field survey, and information from available satellite imagery. These habitat types were assigned Ecological Importance (EI) categories based on their ecological integrity, conservation value, the presence of SCC and their ecosystem processes.

Site Ecological Importance (SEI) is a function of the Biodiversity Importance (BI) of the receptor (e.g., SCC, the vegetation/fauna community or habitat type present in the Project Area) and Receptor Resilience (RR) (its resilience to impacts).

BI is a function of Conservation Importance (CI) and the Functional Integrity (FI) of the receptor. The criteria for the CI and FI ratings are provided in Table 7-1 and Table 7-2 respectively.

Table 7-1 Summary of Conservation Importance (CI) criteria

Conservation Importance	Fulfilling Criteria
Very High	Confirmed or highly likely occurrence of Critically Endangered (CR), Endangered (EN), Vulnerable (VU) or Extremely Rare or CR species that have a global extent of occurrence (EOO) of < 10 km^2. Any area of natural habitat of a CR ecosystem type or large area (> 0.1% of the total ecosystem type extent) of natural habitat of an EN ecosystem type. Globally significant populations of congregatory species (> 10% of global population).
High	Confirmed or highly likely occurrence of CR, EN, VU species that have a global EOO of > 10 km^2. IUCN threatened species (CR, EN, VU) must be listed under any criterion other than A. If listed as threatened only under Criterion A, include if there are less than 10 locations or < 10 000 mature individuals remaining. Small area (> 0.01% but < 0.1% of the total ecosystem type extent) of natural habitat of EN ecosystem type or large area (> 0.1%) of natural habitat of VU ecosystem type. Presence of Rare species. Globally significant populations of congregatory species (> 1% but < 10% of global population).
Medium	Confirmed or highly likely occurrence of populations of Near Threatened (NT) species, threatened species (CR, EN, VU) listed under Criterion A only and which have more than 10 locations or more than 10 000 mature individuals. Any area of natural habitat of threatened ecosystem type with status of VU. Presence of range-restricted species. > 50% of receptor contains natural habitat with potential to support SCC.
Low	No confirmed or highly likely populations of SCC. No confirmed or highly likely populations of range-restricted species. < 50% of receptor contains natural habitat with limited potential to support SCC.
Very Low	No confirmed and highly unlikely populations of SCC. No confirmed and highly unlikely populations of range-restricted species. No natural habitat remaining.

Table 7-2 Summary of Functional Integrity (FI) criteria

Functional Integrity	Fulfilling Criteria
Very High	Very large (> 100 ha) intact area for any conservation status of ecosystem type or > 5 ha for CR ecosystem types. High habitat connectivity serving as functional ecological corridors, limited road network between intact habitat patches. No or minimal current negative ecological impacts, with no signs of major past disturbance.
High	Large (> 20 ha but < 100 ha) intact area for any conservation status of ecosystem type or > 10 ha for EN ecosystem types. Good habitat connectivity, with potentially functional ecological corridors and a regularly used road network between intact habitat patches. Only minor current negative ecological impacts, with no signs of major past disturbance and good rehabilitation potential.
Medium	Medium (> 5 ha but < 20 ha) semi-intact area for any conservation status of ecosystem type or > 20 ha for VU ecosystem types. Only narrow corridors of good habitat connectivity or larger areas of poor habitat connectivity and a busy used road network between intact habitat patches. Mostly minor current negative ecological impacts, with some major impacts and a few signs of minor past disturbance. Moderate rehabilitation potential.
Low	Small (> 1 ha but < 5 ha) area. Almost no habitat connectivity but migrations still possible across some modified or degraded natural habitat and a very busy used road network surrounds the area. Low rehabilitation potential. Several minor and major current negative ecological impacts.
Very Low	Very small (< 1 ha) area. No habitat connectivity except for flying species or flora with wind-dispersed seeds. Several major current negative ecological impacts.

BI can be derived from a simple matrix of CI and FI as provided in Table 7-3.

Table 7-3 Matrix used to derive Biodiversity Importance (BI) from Functional Integrity (FI) and Conservation Importance (CI)

Biodiversity Importance		Conservation Importance				
		Very High	High	Medium	Low	Very Low
Functional Integrity	Very High	Very High	Very High	High	Medium	Low
	High	Very High	High	Medium	Medium	Low
	Medium	High	Medium	Medium	Low	Very Low
	Low	Medium	Medium	Low	Low	Very Low
	Very Low	Medium	Low	Very Low	Very Low	Very Low

The fulfilling criteria to evaluate RR are based on the estimated recovery time required to restore an appreciable portion of functionality to the receptor, as summarised in Table 7-4.

Table 7-4 Summary of Receptor Resilience (RR) criteria

Resilience	Fulfilling Criteria
Very High	Habitat that can recover rapidly (~ less than 5 years) to restore > 75% of the original species composition and functionality of the receptor functionality, or species that have a very high likelihood of: (i) remaining at a site even when a disturbance or impact is occurring, or (ii) returning to a site once the disturbance or impact has been removed.
High	Habitat that can recover relatively quickly (~ 5–10 years) to restore > 75% of the original species composition and functionality of the receptor functionality, or species that have a high likelihood of: (i) remaining at a site even when a disturbance or impact is occurring, or (ii) returning to a site once the disturbance or impact has been removed.
Medium	Will recover slowly (~ more than 10 years) to restore > 75% of the original species composition and functionality of the receptor functionality, or species that have a moderate likelihood of: (i) remaining at a site even when a disturbance or impact is occurring, or (ii) returning to a site once the disturbance or impact has been removed.
Low	Habitat that is unlikely to be able to recover fully after a relatively long period: > 15 years required to restore ~ less than 50% of the original species composition and functionality of the receptor functionality, or species that have a low likelihood of: (i) remaining at a site even when a disturbance or impact is occurring, or (ii) returning to a site once the disturbance or impact has been removed.
Very Low	Habitat that is unable to recover from major impacts, or species that are unlikely to: (i) remain at a site even when a disturbance or impact is occurring, or (ii) return to a site once the disturbance or impact has been removed.

After the determination of BI and RR, the SEI can be ascertained using the matrix as provided in Table 7-5.

Table 7-5 Matrix used to derive Site Ecological Importance from Receptor Resilience (RR) and Biodiversity Importance (BI)

Site Ecological Importance		Biodiversity Importance				
		Very High	High	Medium	Low	Very Low
Receptor Resilience	Very Low	Very High	Very High	High	Medium	Low
	Low	Very High	Very High	High	Medium	Very Low
	Medium	Very High	High	Medium	Low	Very Low
	High	High	Medium	Low	Very Low	Very Low
	Very High	Medium	Low	Very Low	Very Low	Very Low

Interpretation of the SEI in the context of the proposed project is provided in Table 7-6.

Table 7-6 Guideline for interpreting Site Ecological Importance in the context of proposed activities

Site Ecological Importance	Interpretation in relation to proposed development activities
Very High	Avoidance mitigation – no destructive development activities should be considered. Offset mitigation not acceptable/not possible (i.e., last remaining populations of species, last remaining good condition patches of ecosystems/unique species assemblages). Destructive impacts for species/ecosystems where persistence target remains.
High	Avoidance mitigation wherever possible. Minimisation mitigation – changes to project infrastructure design to limit the amount of habitat impacted, limited development activities of low impact acceptable. Offset mitigation may be required for high impact activities.
Medium	Minimisation and restoration mitigation – development activities of medium impact acceptable followed by appropriate restoration activities.
Low	Minimisation and restoration mitigation – development activities of medium to high impact acceptable followed by appropriate restoration activities.
Very Low	Minimisation mitigation – development activities of medium to high impact acceptable and restoration activities may not be required.

The SEI evaluated for each taxon can be combined into a single multi-taxon evaluation of SEI for the assessment area. Either a combination of the maximum SEI for each receptor should be applied, or the SEI may be evaluated only once per receptor but for all necessary taxa simultaneously. For the latter, justification of the SEI for each receptor is based on the criteria that conforms to the highest CI and FI, and the lowest RR across all taxa.

7.3 Appendix C – Specialist Declaration of Independence

I, Sarah Newman, declare that:

- I act as the independent specialist in this application;
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, regulations and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, regulations and all other applicable legislation;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing any decision to be taken with respect to the application by the competent authority; and the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- All the particulars furnished by me in this form are true and correct; and
- I realise that a false declaration is an offence in terms of Regulation 71 and is punishable in terms of Section 24F of the Act.



Sarah Newman

Terrestrial Ecologist

The Biodiversity Company

July 2024

I, Byron Goris, declare that:

- I act as the independent specialist in this application;
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, regulations and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, regulations and all other applicable legislation;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing any decision to be taken with respect to the application by the competent authority; and the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- All the particulars furnished by me in this form are true and correct; and
- I realise that a false declaration is an offence in terms of Regulation 71 and is punishable in terms of Section 24F of the Act.



Byron Goris

Environmental Consultant

The Biodiversity Company

July 2024

I, Carami Burger, declare that:

- I act as the independent specialist in this application;
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, regulations and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, regulations and all other applicable legislation;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing any decision to be taken with respect to the application by the competent authority; and the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- All the particulars furnished by me in this form are true and correct; and
- I realise that a false declaration is an offence in terms of Regulation 71 and is punishable in terms of Section 24F of the Act.



Carami Burger

Terrestrial Ecologist

The Biodiversity Company

July 2024

I, Andrew Husted, declare that:

- I act as the independent specialist in this application;
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, regulations and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, regulations and all other applicable legislation;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing any decision to be taken with respect to the application by the competent authority; and the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- All the particulars furnished by me in this form are true and correct; and
- I realise that a false declaration is an offence in terms of Regulation 71 and is punishable in terms of Section 24F of the Act.



Andrew Husted

Ecologist

The Biodiversity Company

July 2024

7.4 Appendix D – Specialist CVs

Sarah Newman

M.Sc Entomology

Cell: +27 73 391 6933
Email: sarah@thebiodiversitycompany.com
Identity Number: 9312170034086
Date of birth: 17 December 1993



Profile Summary

Work experience in South Africa, Lesotho and Costa Rica.

Extensive experience working in the Sani Pass region of southern Africa investigating the patterns and drivers of ant diversity across an elevation gradient.

Experience with sea turtle monitoring and conservation in Costa Rica.

Areas of Interest

Entomology, Zoology, Biodiversity, Conservation and Community Ecology.

Key Experience

- Terrestrial Ecological Assessments
- Rehabilitation plans and monitoring
- Field work and research
- Taxonomic classification of insects

Country Experience

South Africa

Lesotho

Mauritius

Costa Rica

Nationality

South African

Languages

English – Proficient

Afrikaans – Conversational

Spanish – Conversational

Qualifications

- MSc Entomology (*Distinction*), University of Pretoria
- BSc (Hons) Zoology, University of Pretoria
- BSc Zoology, University of Pretoria
- Cand Sci Nat (158474)

CURRICULUM VITAE: Sarah Newman

Byron Goris

B.Sc Hons in Global Socio-Ecological Systems Change



Cell: +27 81 790 8603
Email: byron@thebiodiversitycompany.com
Identity Number: 9904145161083
Date of birth: 14 April 1999

Profile Summary

Environmental work experience across South Africa (2 years).

Theoretical and practical understanding of methodology in both aquatic, terrestrial, and global change ecology.

General training and experience in aspects of conservation, biogeography, and socio-economic sustainability.

Areas of Interest

Ecological systems approaches, global environmental change, socio-economic sustainability, multi/trans-disciplinarity, sports ecology, traditional medicinal plant science.

Key Experience

- Aquatic, Terrestrial, and Wetland Ecological Assessments
- Environmental Field work and basic field methodology
- Business sustainability
- Sports Ecology Research
- Habitat delineation
- Field work and research

Country Experience

South Africa

Nationality

South African

Languages

English – Proficient

Afrikaans – Basic

Qualifications

- BSc (Hons) Animals, Plants, and Environmental Sciences; University of the Witwatersrand
- BSc Biology, University of the Witwatersrand

CURRICULUM VITAE: Byron Goris

Carami Burger

B.Sc. Honours – Ecological Interactions and Ecosystem Resilience (Cum Laude)

(Pr Sci Nat)

Cell: +27 83 630 9077

Email: Carami@thebiodiversitycompany.com

Identity Number: 9606250185084

Date of birth: 25 June 1996



Profile Summary

Working experience in South Africa and Mozambique.

Specialist experience with infrastructure development, road development, renewable energy, mining and prospecting.

Specialist expertise include terrestrial ecology, wetland resources, rehabilitation and management plans, environmental compliance and monitoring.

Areas of Interest

Renewable Energy & Bulk Services Infrastructure Development, Mining, Farming, Sustainability and Conservation.

Key Experience

- Environmental Impact Assessments (EIA)
- Basic Assessments
- Terrestrial Ecological Assessments
- Wetland Delineation and Ecological Assessments
- Environmental Management Programmes (EMPr)
- Rehabilitation Plans
- Invasive Species Plans
- Search and Rescue Plans
- Environmental Compliance Audits
- Water Use License Applications
- Dust Fallout Monitoring
- Water Quality Monitoring

Countries worked in

South Africa

Mozambique

Zambia

Angola

Sierra Leone

Nationality

South African

Languages

English – Proficient

Afrikaans – Proficient

Qualifications

- BSc Hons Ecological Interactions and Ecosystem Resilience.
- BSc Botany and Zoology.
- Pr Sci Nat (121757)

Andrew Husted

M.Sc Aquatic Health (*Pr Sci Nat*)

Cell: +27 81 319 1225
Email: andrew@thebiodiversitycompany.com
Identity Number: 7904195054081
Date of birth: 19 April 1979



Profile Summary

Working experience throughout South Africa, West and Central Africa and also Armenia & Serbia.

Specialist experience in exploration, mining, engineering, hydropower, private sector and renewable energy.

Experience with project management for national and international multi-disciplinary projects.

Specialist guidance, support and facilitation for the compliance with legislative processes, for in-country requirements, and international lenders.

Specialist expertise include Instream Flow and Ecological Water Requirements, Freshwater Ecology, Terrestrial Ecology and also Ecosystem Services.

Areas of Interest

Sustainability and Conservation.

Instream Flow and Ecological Water Requirements.

Publication of scientific journals and articles.

Key Experience

- World Bank, Equator Principles and the International Finance Corporation requirements
- Environmental, Social and Health Impact Assessments (ESHIA)
- Environmental Management Programmes (EMP)
- Ecological Water Requirement determination experience
- Wetland delineations and ecological assessments
- Rehabilitation Plans and Monitoring
- Fish population structure assessments
- The use of macroinvertebrates to determine water quality
- Aquatic Ecological Assessments
- Aquaculture

Country Experience

Angola, Botswana, Cameroon

Democratic Republic of Congo

Ghana, Ivory Coast, Lesotho

Liberia, Mali, Mauritius, Mozambique

Nigeria, Republic of Armenia,

Senegal, Serbia, Sierra Leone, South Africa

Tanzania

Nationality

South African

Languages

English – Proficient

Afrikaans – Conversational

German - Basic

Qualifications

- MSc (University of Johannesburg) – Aquatic Health.
- BSc Honours (Rand Afrikaans University) – Aquatic Health
- BSc Natural Science
- Pr Sci Nat (400213/11)
- Certificate of Competence: Mondi Wetland Assessments
- Certificate of Competence: Wetland WET-Management
- SASS 5 (Expired) – Department of Water Affairs and Forestry for the River Health Programme
- EcoStatus application for rivers and streams

CURRICULUM VITAE: Andrew Husted

Appendix E
Wetland Impact Assessment

Wetland Functional and Impact Assessment for the proposed Withok Tailings Storage Facility Project

City of Ekurhuleni Metropolitan Municipality, Gauteng Province, South Africa

7/19/2024

Prepared by:

The Biodiversity Company

Cell: +27 81 319 1225

Fax: +27 86 527 1965

info@thebiodiversitycompany.com

www.thebiodiversitycompany.com

Report Name	Wetland Functional and Impact Assessment for the proposed Withok Tailings Storage Facility Project	
Specialist Theme	Aquatic Theme – Wetland Baseline and Impact Assessment	
Project Reference	Withok TSF	
Report Version	7/19/2024	
Environmental Assessment Practitioner	KONGIWE	
Fieldwork & Report Writer	Namitha Singh (SACNASP Pr. Sci. Nat. 157927)	
Reviewer	Andrew Husted (SACNASP Pr. Sci. Nat. 400213/33)	
Declaration	The Biodiversity Company and its associates operate as independent consultants under the auspice of the South African Council for Natural Scientific Professions. We declare that we have no affiliation with or vested financial interests in the proponent, other than for work performed under the Environmental Impact Assessment Regulations, Amended. We have no conflicting interests in the undertaking of this activity and have no interests in secondary developments resulting from the authorisation of this project. We have no vested interest in the project, other than to provide a professional service within the constraints of the project (timing, time and budget) based on the principals of science.	

Table of Contents

1 Introduction 6
1.1 Background 6
1.2 Scope of Work 7
1.3 Project Description 7
1.4 Assumptions and Limitations 11
1.5 Key Legislative Requirements 12
1.6 National Water Act (NWA, 1998) 12
1.7 National Environmental Management Act (NEMA, 1998) 13
1.8 Legislative Framework 13
2 Fieldwork 15
2.1 Freshwater Biodiversity Field Assessment 15
3 Results & Discussion 16
3.1 Desktop Dataset Assessment 16
3.1.1 Vegetation Types 16
3.1.2 Climate 17
3.1.3 Soils and Geology 17
3.1.4 Hydrological Characteristics 17
3.1.5 Ecologically Important Landscape Features 18
3.2 Wetland Field Survey 21
3.2.1 Delineation 21
3.2.2 Classification and Description 23
3.2.3 Wetland Area 24
3.2.4 Risk Screening 25
3.3 Wetland Functional and Ecological Assessment 25
3.3.1 Functional Assessment 26
3.3.2 Present Ecological State 28
3.3.3 Ecological Importance and Sensitivity 29
3.3.4 Recommended Ecological Category and Recommended Management Objective 30
3.4 Buffer Requirements 30
3.4.1 Regulation Zones 31
3.5 Site Sensitivity Verification 32
3.5.1 Desktop Ecological Sensitivity 32

3.5.2 Screening Tool Comparison 33
4 Risk and Impact Assessment 36
4.1 Current Impacts to Freshwater Biodiversity 36
4.2 Alternatives Considered 36
4.3 Quantitative Risk and Impact Assessment 36
4.3.1 Potential Aniticipated Impacts 37
4.4 Mitigation Measures 40
4.5 Cumulative Impacts 42
5 Conclusion 44
5.1 Risk and Impact Statement 44
5.2 Specialist Opinion 44
6 References 45
7 Appendix Items 47
7.1 Appendix A – Methodology 47
7.1.1 Desktop Dataset Assessment 47
7.1.2 Wetland Field Survey 49
7.1.3 Wetland Functional and Ecological Assessment 50
7.1.4 Buffer Requirements 51
7.1.5 Site Sensitivty Verification 52
7.2 Appendix B – Risk and Impact Assessment 52
7.2.1 Risk Assessment 52
7.2.2 Cumulative Impact Assessment 52
7.3 Appendix C – Specialist Declaration of Independence 54
7.4 Appendix D – Specialist CVs 56

List of Tables

Table 1-1 A list of key legislative requirements 12

Table 1-2 Aquatic Biodiversity Specialist Assessment information requirements as per the relevant protocol, including the location of the information within this report 13

Table 3-1 Summary of relevance of the proposed project to ecologically important landscape features 18

Table 3-2 Wetland classification as per SANBI guideline (Ollis et al., 2013) 23

Table 3-3 Summary of natural wetland area within the project area of influence 24

Table 3-4 Risk status of the delineated wetlands 25

Table 3-5 Summary of the average ecosystem scores of the assessed wetland units 26

Table 3-6 Average Present Ecological State scores for the assessed wetlands 28

Table 3-7 Aspects considered in the Ecological Importance and Sensitivity assessment 29

Table 3-8 Summary of the REC and RMO categories assigned to the relevant wetlands 30

Table 3-9 Buffer requirements for the relevant wetland features 30

Table 3-10 Legislated zones of regulation 31

Table 3-11 Summary of the screening tool vs specialist assigned sensitivities 34

Table 4-1 Aspects and impacts relevant to the proposed activity 37

Table 4-2 Summative results of the DWS Risk Assessment conducted for the proposed activities 38

Table 4-3 Mitigation measures for the expected impacts of the proposed development 41

Table 4-4 Cumulative Impact Assessment for the proposed activities 43

Table 5-1 Ecological characteristics and buffer requirements of the freshwater resources 44

Table 7-1 Classes for determining the likely extent to which a benefit is being supplied 50

Table 7-2 The Present Ecological Status categories (Macfarlane et al., 2007) 50

Table 7-3 Description of Ecological Importance and Sensitivity categories 51

Table 7-4 Recommended Ecological Category and Recommended Management Objectives for water resources based on Present Ecological State and Ecological Importance and Sensitivity scores 51

Table 7-5 Significance ratings matrix 52

Table 7-6 Aspects and ratings considered in the cumulative impact assessment 52

List of Figures

Figure 1-1 Location of the proposed project 7

Figure 1-2 Map illustrating the project location, as provided by Kongiwe (2024) 10

Figure 1-3 Map illustrating the site infrastructure associated with the project, as provided by Kongiwe (2024) 10

Figure 1-4 Proposed TSF site and project area of influence 11

Figure 3-1 Climate for the project area based on the Soweto Highveld Grassland (Mucina & Rutherford, 2006) 17

Figure 3-2 Topographical Inland Water Areas and River Lines that intersect the project area of influence 18

Figure 3-3 Wetland features identified within the project area of influence according to the South African Inventory of Aquatic Ecosystems dataset 19

Figure 3-4 Wetland features identified within the project area of influence according to the National Freshwater Ecosystem Priority Ecosystems dataset 20

Figure 3-5 Gauteng Conservation Plan overlay for the project area of influence 21

Figure 3-6 Delineation of wetland features within the project area of influence 22

Figure 3-7 Representative photographs of the different wet areas within the project area. A) Unchannelled valley-bottom; B) Dam within unchannelled valley-bottom; C) Artificial seep; D) Excavated area; E) Drainage trench; & F) Disturbed areas resulting in artificial wetland conditions ... 22

Figure 3-8 Amalgamated diagram of an unchannelled valley-bottom, highlighting the dominant water inputs, throughputs and outputs, SANBI guidelines (Ollis et al., 2013) 23

Figure 3-9 Amalgamated diagram of a seep wetland, highlighting the dominant water inputs, throughputs and outputs, SANBI guidelines (Ollis et al., 2013) 24

Figure 3-10 The watercourse classifications (DWAF, 2005) 24

Figure 3-11 Risk status of the identified and delineated watercourse features 25

Figure 3-12 Average Ecosystem Service Classes of the assessed wetlands 27

Figure 3-13 Present Ecological State Classes of the delineated wetlands 29

Figure 3-14 Recommended buffers for the identified wetlands in relation to the proposed development 31

Figure 3-15 Aquatic Biodiversity Theme Sensitivity for the project area 33

Figure 3-16 Sensitivity classification of the project area of influence and respective freshwater resources 35

Figure 4-1 The mitigation hierarchy as described by the DEA (2013) 37

Figure 7-1 Cross section of a wetland, indicating how the soil wetness and vegetation indicators respond to changes in topography (Ollis et al. 2013) 49

1 Introduction

1.1 Background

The Biodiversity Company was commissioned to conduct a wetland baseline and impact assessment in support of the environmental and water use authorisation process for the proposed Withok Tailings Storage Facility (TSF) project. The project is located in the Brakpan area of the City of Ekurhuleni Metropolitan Municipality in the Gauteng Province (Figure 1-1). A 500 m radius has been demarcated for the project to facilitate the identification of wetlands within the regulatory zone, this area is referred to as the Project Area of Influence (PAOI).

This assessment has been completed in accordance with the requirements of the published Government Notice (GN) 4167 by the Department of Water and Sanitation (DWS) (previously GN 509 of 2016 and GN 3139 of 2023). The said notice was published in the Government Gazette (no. 49833) under Section 39 of the National Water Act (Act no. 36 of 1998) in December 2023, for a Water Use Licence (WUL) in terms of Section 21(c) & (i) water uses. The GN 4167 process provides an allowance to apply for a WUL for Section 21(c) & (i) under a General Authorisation (GA), as opposed to a full Water Use Licence Application (WULA). A water use (or potential) qualifies for a GA under GN 4167 when the proposed water use/activity is subjected to analysis using the DWS Risk Assessment Matrix (RAM), provided the identified risks are all considered a low risk and the applicant is listed under Appendix D1 or Appendix D2 of the same notice. This assessment will implement the RAM and provide a specialist opinion on the favourability for water use authorisation.

This assessment was conducted in accordance with the amendments to the Environmental Impact Assessment Regulations (2014) (GNR 326, 7 April 2017) of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA). The approach has taken cognisance of the recently published Government Notices (GN) 320 (20 March 2020) and GN 1150 (30 October 2020) in terms of NEMA, dated 20 March and 30 October 2020: “Procedures for the Assessment and Minimum Criteria for Reporting on Identified Environmental Themes in terms of Sections 24(5)(a) and (h) and 44 of the National Environmental Management Act, 1998, when applying for Environmental Authorisation” (Reporting Criteria).

This report, after taking into consideration the findings and recommendation provided by the specialist herein, should inform and guide the Environmental Assessment Practitioner (EAP) and regulatory authorities, enabling informed decision making with regards to the ecological viability of the proposed development and related activities.

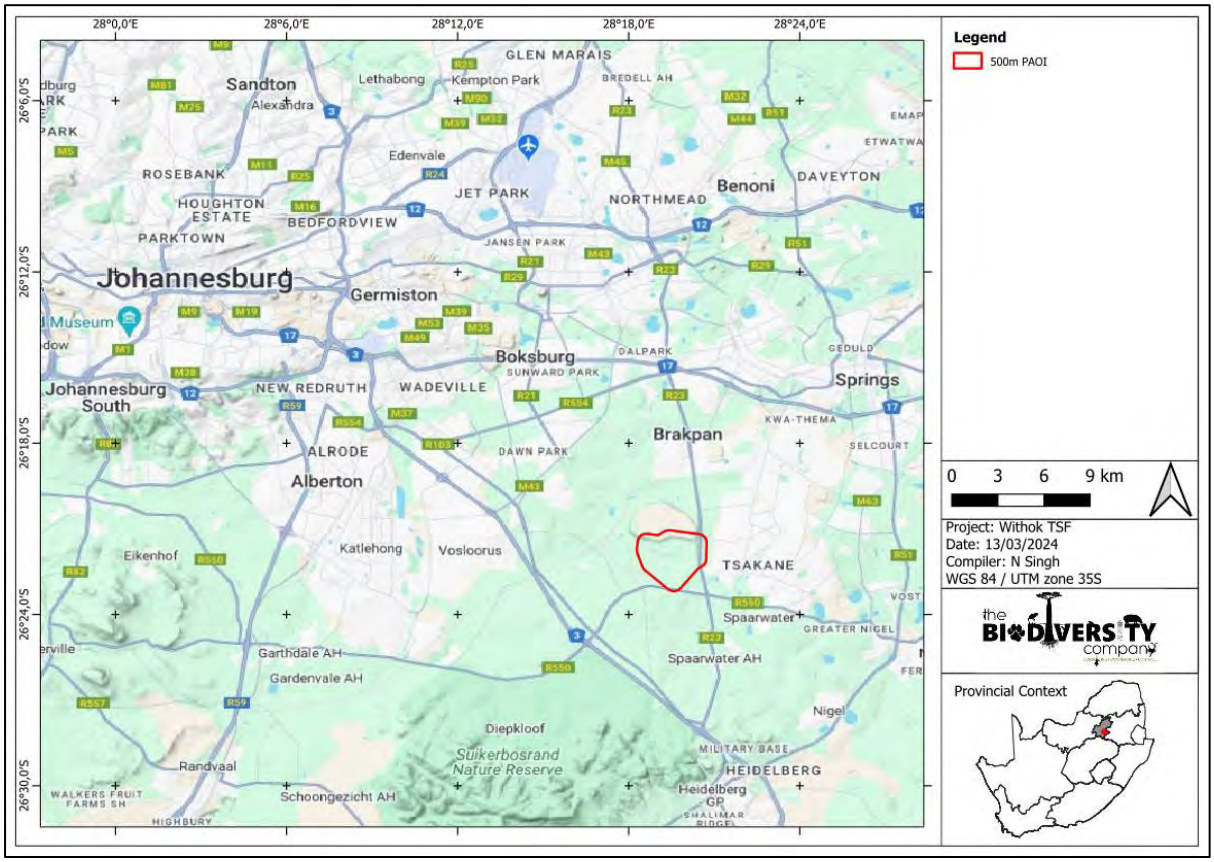


Figure 1-1 Location of the proposed project

1.2 Scope of Work

The following tasks were completed in fulfilment of the terms of reference for this assessment:

- A desktop assessment of available and related datasets to provide context of the freshwater biodiversity of the project area and to indicate potential wetland areas;
- The delineation, classification and assessment of wetlands within 500 m of the project area;
- An assessment of the related impacts through the use of the Risk Assessment (DWS, 2023);
- The provision of recommendations relevant to associated impacts; and
- Report compilation detailing the baseline findings.

1.3 Project Description

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.

Ergo has identified the 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), with a the original Withok TSF having been reclaimed over several years ending 2006.

The following components are currently present on site:

- Access roads;
- Withok TSF footprint; and
- Brakpan TSF and associated stormwater management infrastructure.

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 for reuse.

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

The intended recommissioning of the Withok TSF is to utilise 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 pre-deposition design components are listed below:

- 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; and
- 250 mm diameter cyclones, complete with feed pipes, valves, overflow pipes.

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 for recycling. The remainder is evaporated in the catchment paddocks.

- Drain flows will also be collected in the same collector pipe.

- The Withok complex will have a dual compartment RWD (with approved DWS liner system). 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 000m3 to comply with GN R704. Additional capacity will provide operational flexibility and reduce the risk of discharge during high rainfall periods. Accordingly, the design capacity of the Withok RWD is approximately100 000m3.

- Water must be returned to process, from the Withok RWD, at a rate of up to 9 800m3/day.

Several drainage courses dissect the site. These consist of a draining course draining northwards from the southern tip of the original footprint and several smaller draining courses running southwards from the interface with the Brakpan TSF, all of which are tributaries to a draining course running from east to west through the centre of the site. The latter has its origins in Tsakane township, located to the east of Heidelberg Road, and drains first into an Attenuation Dam just east of the road. Historically, overflow from the Attenuation Dam was released into a culvert which crosses below the site discharging 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, that diverts water from a sump, east to west along the south flank of the optimised Withok TSF footprint.

The Attenuation dam wall will also be upgraded as part of the project.

Ergo Mining is cognisant of the Global Industry Standard on Tailings Management (GISTM) and the Safety-First principles. The final life of the Withok TSF design, construction, operation and monitoring will align with these requirements where appropriate.

The project location can be seen presented in Figure 1-2 and the proposed site infrastructure can be seen presented in Figure 1-3.

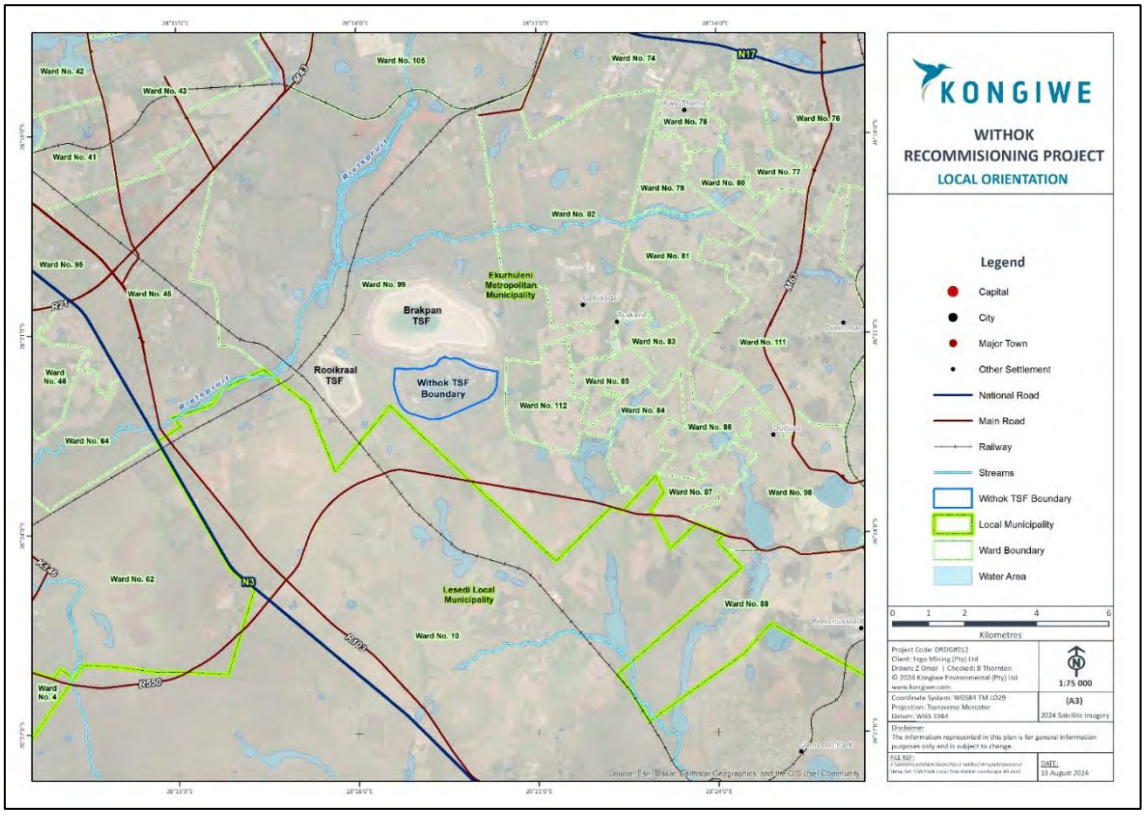


Figure 1-2 Map illustrating the project location, as provided by Kongiwe (2024)

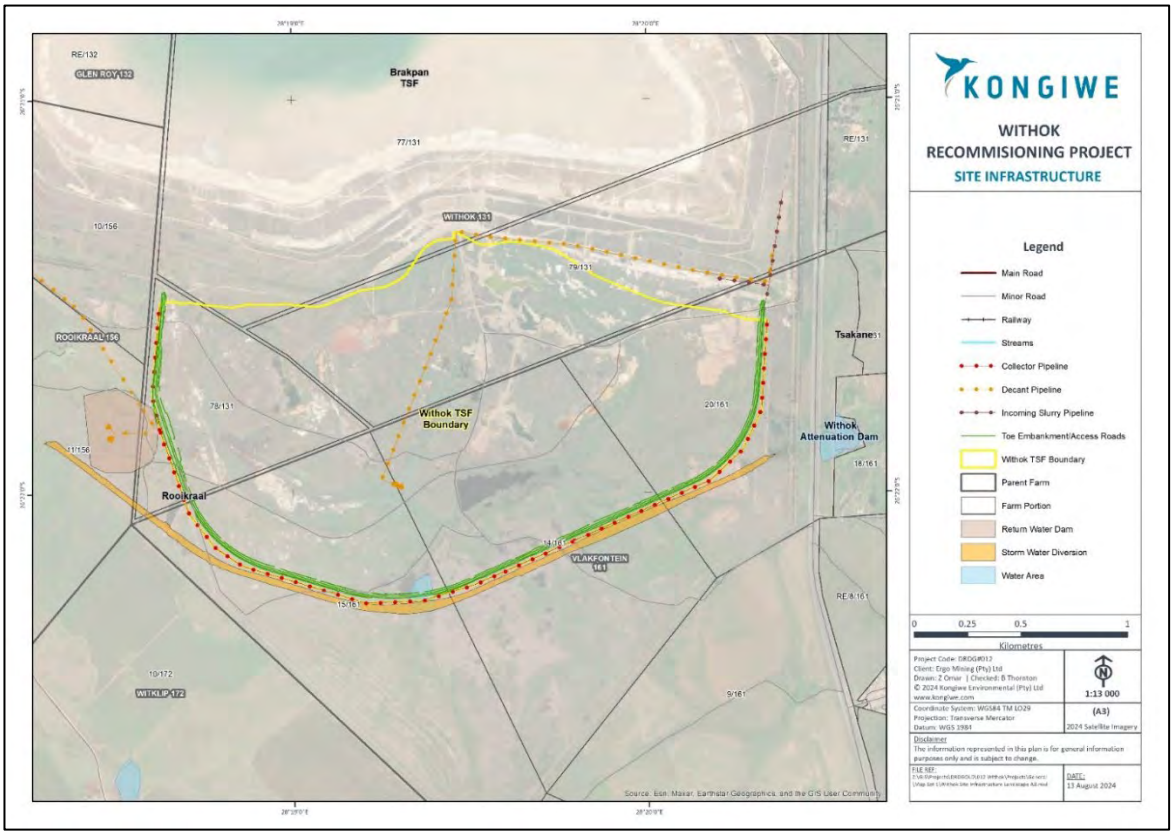


Figure 1-3 Map illustrating the site infrastructure associated with the project, as provided by Kongiwe (2024)

The assessment area is delimited by the “Withok Site” and the larger “500m PAOI” indicated in Figure 1-4.

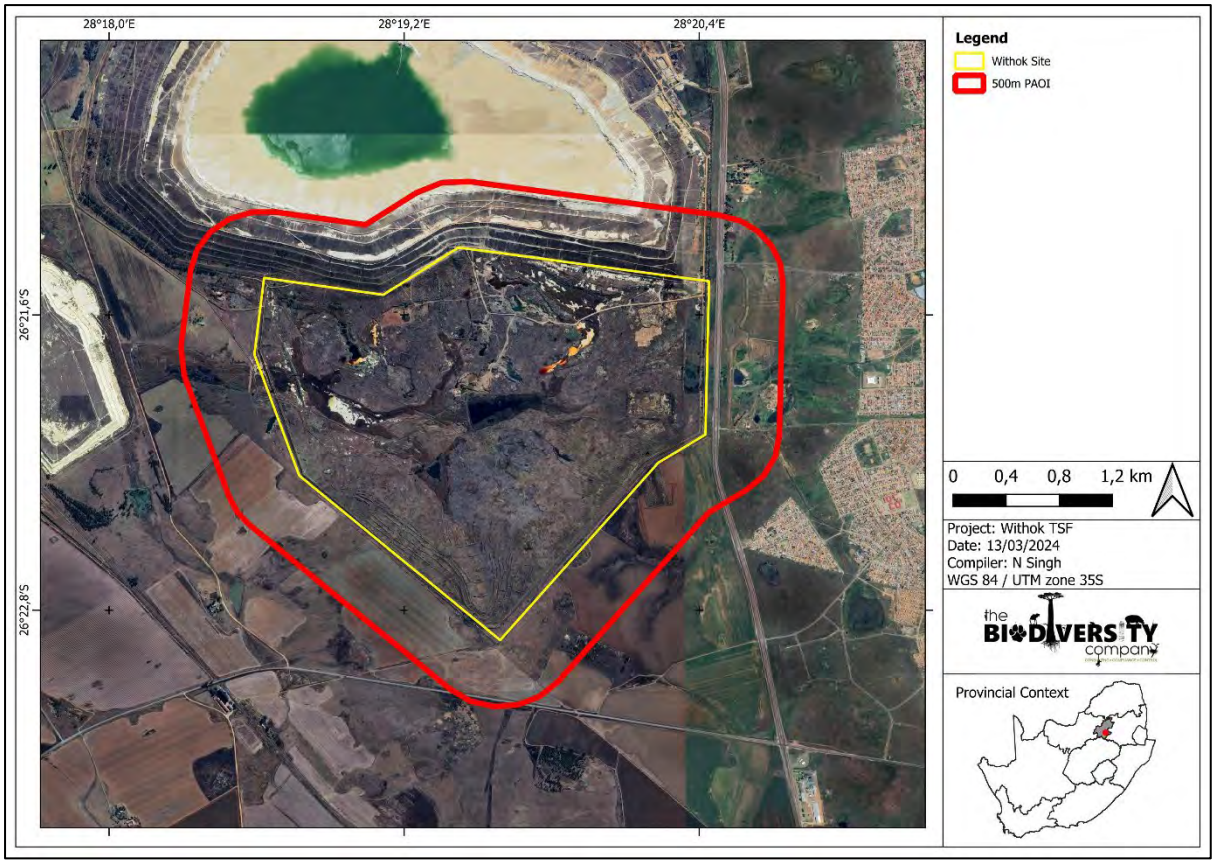


Figure 1-4 Proposed TSF site and project area of influence

1.4 Assumptions and Limitations

The following aspects were considered as limitations:

- It has been assumed that the spatial files provided to the specialist is accurate;
- Apart from the “Withok Site” polygon no other spatial information was provided in relation to the layout of the proposed facility at the time of survey and report preparation;
- The focus for the assessment was the proposed area. Freshwater features within the larger 500 m PAOI were therefore only delineated and assessed via desktop and, were mapped to indicate connectivity to those systems within the proposed area;
- The results presented herein are an outcome of a rapid survey where areas characterised by external wetland attributes were the focus for assessment and where representative sampling was conducted;
- Attributed to the nature of the existing adjacent activities (ie. a TSF) and the historical use of the site for tailings storage, several artificial wet areas were noted. However, only natural features were considered for the ecological components of this assessment with some artificial areas delineated to provide context for their linkage (or potential) to natural systems;
    - Several artificial drainage trenches were observed within the site and are assumed to be a result of channelling to direct surface water, or water from the Brakpan TSF into

collection points. These features were not delineated as they are not representative of natural systems; and

- The GPS used for water resource delineations is accurate to within five meters. Therefore, the wetland delineation plotted digitally may be offset by a maximum of five meters to either side.

1.5 Key Legislative Requirements

The legislation, policies and guidelines listed below in Table 1-1 are applicable to the current project. The list below, although extensive, may not be complete and other legislation, policies and guidelines may apply in addition to those listed below.

Table 1-1 A list of key legislative requirements

Region	Legislation / Guideline	Comment
National	National Environmental Management Act (Act No. 107 of 1998) (NEMA)	To provide for the effective protection and controlled utilisation of the environment and for matters incidental thereto.
	NEMA: Environmental Impact Assessment Regulations (2014), as amended, with cognisance of Appendix 6 requirements in GNR 326 (7 April 2017, as amended).	Minimum content for specialist reports.
	NEMA: Government Notices (GN) 320 (20 March 2020) and GN 1150 (30 October 2020)	The minimum criteria for reporting. Protocol for the specialist assessment and minimum report content requirements.
	The National Environmental Management: Biodiversity Act (Act No. 10 of 2004) (NEMBA), Threatened or Protected Species Regulations	The protection of species and ecosystems that warrant protection.
	National Environmental Management: Waste Act (Act No. 59 of 2008)	The regulation of waste management to protect the environment.
	National Water Act (Act No. 36 of 1998) (NWA)	To provide for the regulation of water uses.
	NWA: Government Notice (GN) 4167 (previously GN 509 of 2016 and GN 3139 of 2023)	Water Use Licence (WUL) in terms of Section 21(c) & (i) water uses and the provision to apply for a General Authorisation subject to usage and outcome of the Risk Assessment Matrix.
	NEMBA: Alien and Invasive Species Regulations (2014) (GNR R598, 1 August 2014). NEMBA: Alien and Invasive Species Lists (2020) (GN 1003, September 2020)	The regulation and management of alien invasive species.
Provincial	Conservation of Agricultural Resources Act, 1983 (Act 43 of 1983) (CARA)	To provide for control over the utilisation of the natural agricultural resources, including the vegetation and the combating of weeds and invader plants.
	Transvaal Nature Conservation Ordinance (Act No. 12 of 1998)	To consolidate and amend the laws relating to nature conservation and to provide matters incidental thereto.
	Gauteng Conservation Plan (2022)	The spatial designation of conservation areas and targets within the province.

1.6 National Water Act (NWA, 1998)

The DWS is the custodian of South Africa's water resources and therefore assumes public trusteeship of water resources, which includes watercourses, surface water, estuaries, or aquifers. The National Water Act (Act No. 36 of 1998) (NWA) allows for the protection of water resources, which includes:

- The maintenance of the quality of the water resource to the extent that the water resources may be used in an ecologically sustainable way;
- The prevention of the degradation of the water resource; and
- The rehabilitation of the water resource.

A watercourse means:

- A river or spring;
- A natural channel in which water flows regularly or intermittently;
- A wetland, lake or dam into which, or from which, water flows; and
- Any collection of water which the Minister may, by notice in the Gazette, declare to be a watercourse, and a reference to a watercourse includes, where relevant, its bed and banks.

The NWA recognises that the entire ecosystem, not just the water itself, constitutes a water resource and as such needs to be conserved. No activity may therefore take place within a watercourse unless it is authorised by the DWS. Any area within a wetland or riparian zone is therefore excluded from development unless authorisation is obtained from the DWS in terms of Section 21 (c) and (i).

1.7 National Environmental Management Act (NEMA, 1998)

The National Environmental Management Act (NEMA) (Act 107 of 1998) and the associated Regulations as amended in April 2017, states that prior to any development taking place within a wetland or riparian area, an environmental authorisation process needs to be followed. This could follow either the Basic Assessment Report (BAR) process or the Environmental Impact Assessment (EIA) process depending on the scale of the impact.

1.8 Legislative Framework

In line with the protocol for the specialist assessment and minimum report content requirements for environmental impacts on freshwater biodiversity, as per Government Notice 320 published in terms of NEMA, dated 20 March 2020: “Procedures for the Assessment and Minimum Criteria for Reporting on Identified Environmental Themes in terms of Sections 24(5)(a) and (h) and 44 of the National Environmental Management Act, 1998, when applying for Environmental Authorisation” – the following has been assumed:

An applicant intending to undertake an activity identified in the scope of this protocol on a site identified on the screening tool as being of:

- “very high” for aquatic biodiversity, must submit an Aquatic Biodiversity Specialist Assessment.

An Aquatic / Freshwater Biodiversity Specialist Assessment Report must contain the information as presented in Table 1-2 below.

Table 1-2 Aquatic Biodiversity Specialist Assessment information requirements as per the relevant protocol, including the location of the information within this report

Information to be Included (as per GN 320, 20 March 2020)	Report Section
The assessment must be prepared by a specialist registered with the South African Council for Natural Scientific Professionals (SACNASP) with expertise in the field of aquatic sciences	7.3
Contact details of the specialist, their SACNASP registration number, their field of expertise and a curriculum vitae	7.4
A signed statement of independence by the specialist(s)	7.3
The assessment must be undertaken on the preferred site and within the proposed development footprint	1.3
A baseline description of the aquatic biodiversity and ecosystems on the site, including: aquatic ecosystem types; presence of aquatic species, and composition of aquatic species communities, their habitat, distribution and movement patterns.	3.1.5

The threat status of the ecosystem and species as identified by the screening tool	3.5.1
An indication of the national and provincial priority status of the aquatic ecosystem, including a description of the criteria for the given status (i.e. if the site includes a wetland or a river freshwater ecosystem priority area or sub catchment, a strategic water source area, a priority estuary, whether or not they are free-flowing rivers, wetland clusters, a critical biodiversity or ecologically sensitivity area)	3.1.5
A description of the ecological importance and sensitivity of the aquatic ecosystem including: (a) the description (spatially, if possible) of the ecosystem processes that operate in relation to the aquatic ecosystems on and immediately adjacent to the site (e.g., movement of surface and subsurface water, recharge, discharge, sediment transport, etc.); and (b) the historic ecological condition (reference) as well as present ecological state of rivers (in- stream, riparian and floodplain habitat), wetlands and/or estuaries in terms of possible changes to the channel and flow regime (surface and groundwater)	3.2.3
The assessment must identify alternative development footprints within the preferred site which would be of a "low" sensitivity as identified by the screening tool and verified through the site sensitivity verification and which were not considered appropriate	-
Related to impacts, a detailed assessment of the potential impacts of the proposed development on the following aspects must be undertaken to answer the following questions: Is the proposed development consistent with maintaining the priority aquatic ecosystem in its current state and according to the stated goal? Is the proposed development consistent with maintaining the resource quality objectives for the aquatic ecosystems present? How will the proposed development impact on fixed and dynamic ecological processes that operate within or across the site? This must include: (a) impacts on hydrological functioning at a landscape level and across the site which can arise from changes to flood regimes (e.g. suppression of floods, loss of flood attenuation capacity, unseasonal flooding or destruction of floodplain processes); (b) will the proposed development change the sediment regime of the aquatic ecosystem and its sub-catchment (e.g. sand movement, meandering river mouth or estuary, flooding or sedimentation patterns); (c) what will the extent of the modification in relation to the overall aquatic ecosystem be (e.g. at the source, upstream or downstream portion, in the temporary / seasonal / permanent zone of a wetland, in the riparian zone or within the channel of a watercourse, etc.); and (d) to what extent will the risks associated with water uses and related activities change.	4.3
How will the proposed development impact on the functioning of the aquatic feature? This must include: (a) base flows (e.g., too little or too much water in terms of characteristics and requirements of the system); (b) quantity of water including change in the hydrological regime or hydroperiod of the aquatic ecosystem (e.g., seasonal to temporary or permanent; impact of over -abstraction or instream or off stream impoundment of a wetland or river); (c) change in the hydrogeomorphic typing of the aquatic ecosystem (e.g., change from an unchanneled valley-bottom wetland to a channelled valley -bottom wetland); (d) quality of water (e.g., due to increased sediment load, contamination by chemical and/or organic effluent, and/or eutrophication); (e) fragmentation (e.g., road or pipeline crossing a wetland) and loss of ecological connectivity (lateral and longitudinal); and (f) the loss or degradation of all or part of any unique or important features associated with or within the aquatic ecosystem (e.g., waterfalls, springs, oxbow lakes, meandering or braided channels, peat soils, etc.)	4.3
How will the proposed development impact on key ecosystems regulating and supporting services especially: (a) flood attenuation; (b) streamflow regulation; (c) sediment trapping; (d) phosphate assimilation; (e) nitrate assimilation; (f) toxicant assimilation; (g) erosion control; and (h) carbon storage?	4.3
How will the proposed development impact community composition (numbers and density of species) and integrity (condition, viability, predator-prey ratios, dispersal rates, etc.) of the faunal and vegetation communities inhabiting the site?	-

A statement on the duration, date and season of the site inspection and the relevance of the season to the outcome of the assessment	2.1
The methodology used to undertake the site inspection and the specialist assessment, including equipment and modelling used, where relevant	7.1
A description of the assumptions made, any uncertainties or gaps in knowledge or data	1.4
The location of areas not suitable for development, which are to be avoided during construction and operation, where relevant	3.4
Additional environmental impacts expected from the proposed development	-
Any direct, indirect and cumulative impacts of the proposed development on site	4.3.1 & 4.5
The degree to which impacts and risks can be mitigated	4.5
The degree to which the impacts and risks can be reversed	4.5
The degree to which the impacts and risks can cause loss of irreplaceable resources	4.5
A suitable construction and operational buffer for the aquatic ecosystem, using the accepted methodologies	3.4
Proposed impact management actions and impact management outcomes for inclusion in the Environmental Management Programme (EMPr)	4.4
A motivation must be provided if there were development footprints identified as having a “low” aquatic biodiversity sensitivity and that were not considered appropriate	1.8
A substantiated statement, based on the findings of the specialist assessment, regarding the acceptability or not of the proposed development and if the proposed development should receive approval or not; and	5.2
Any conditions to which this statement is subjected	5.2

A signed copy of the assessment must be appended to the Basic Assessment Report or Environmental Impact Assessment Report.

2 Fieldwork

2.1 Freshwater Biodiversity Field Assessment

A field survey for the area was undertaken on the 17th of April 2024 (Autumn), which is a dry-season survey, to identify the presence of freshwater features (wetlands) and to delineate their spatial extents. The seasonality is not considered to be a limiting factor to the assessment and the results of this assessment are conclusive.

3 Results & Discussion

3.1 Desktop Dataset Assessment

3.1.1 Vegetation Types

The PAOI is situated in the grassland biome.

On a fine scale, the PAOI overlaps with the Soweto Highveld Grassland and the Tsakane Clay Grassland vegetation types.

The following information pertaining to the Soweto Highveld Grassland is noted as per Mucina and Rutherford (2006):

- Distribution – This vegetation type is distributed primarily in the Gauteng and Mpumalanga with small fragments present in the North West and Free State provinces. The extent of the vegetation type is roughly delineated by the Vaal River and its associated local catchments, Perdekop in the southeast and the N17 between Johannesburg and Ermelo. In its western approach the Soweto Highveld Grassland extends into Randfontein and Soweto and, in the south extending to Vanderbijlpark, Vereeniging and Sasolburg;

- Topography and Structure – The vegetation characteristics include short to medium-high, dense, tufted grassland which mostly includes *Themeda triandra* within gently to moderately undulating landscapes on the Highveld plateau. Other grass species which occur to a lesser extent include *Eragrostis recemosa*, *Elionurus muticus*, *Tristachya leucothrix* and *Heteropogon contortus*;

- The altitude of this vegetation type ranges between 1 420 Meters Above Sea Level (MASL) and 1 760 MASL; and

- Conservation Status – This vegetation type is classified as Endangered, with its national conservation target being 24%. Half of the area is already transformed by agriculture, mining, urban land use. Few conservation areas exist which includes, but are not limited to, Waldrift, Suikerbosrand and Rolfe's Pan Nature Reserve.

The following information pertaining to the Tsakane Clay Grassland is noted as per Mucina and Rutherford (2006):

- Distribution – This vegetation type is distributed throughout Gauteng and Mpumalanga stretching in a narrow band in patches from Springs to Soweto and broadens widely to Nigel and to Vereeniging thereafter. This vegetation type stretches from Vereeniging to north of the Vaal Dam and again between Standerton and Balfour;

- Topography and Structure – The vegetation type is characterised by low hills and flat to slightly undulating plains. The vegetation within this vegetation type includes dense grasslands dominated by a mixture of common Highveld grasses which include *Heteropogon contortus*, *Themeda triandra*, a number of Eragrostis species and *Elionurus muticus*. Asteraceae, Malvaceae, Rubiaceae, Lamiaceae and Fabaceae are some of the prominent Forbs that can be expected in this vicinity. Disturbances in this vegetation type has led to *Hyparrhenia hirta* and *Eragrostis chloromelas* dominating;

- The altitude of this vegetation type ranges between 1 480 Meters Above Sea Level (MASL) and 1 680 MASL; and

- Conservation Status – This vegetation type is classified endangered with a target percentage of 24. Only 1.5% is conserved in reserves which include Olifantsvlei, Suikerbosrand, Marievale and Kliprivierberg. More than 60% of this vegetation type has been lost due to urbanisation, cultivation, the building of dams and roads as well as mining.

3.1.2 Climate

The dominant vegetation type within the PAOI, the Soweto Highveld Grassland was used to build context for the climate conditions experienced in the area. The climate for the vegetation regions is characterised by summer rainfall and exhibits extreme temperature hikes and drops in summer and winter, respectively. The Mean Annual Precipitation (MAP) for the region in 662 mm (Figure 3-1) (Mucina & Rutherford, 2006).

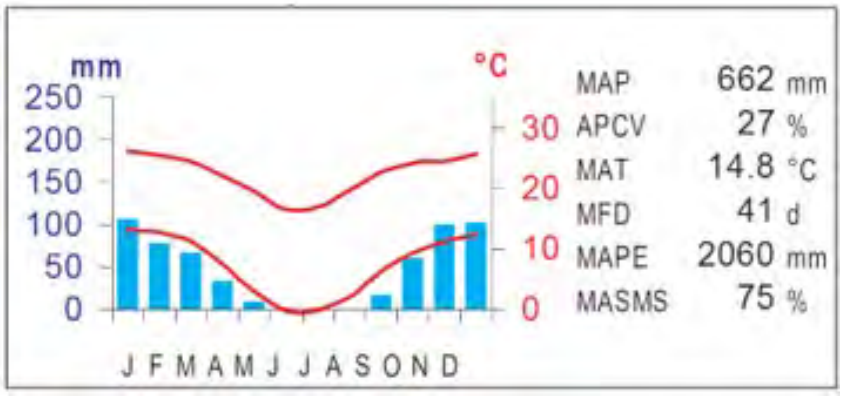


Figure 3-1 Climate for the project area based on the Soweto Highveld Grassland (Mucina & Rutherford, 2006)

3.1.3 Soils and Geology

According to the land type database (Land Type Survey Staff, 1972 - 2006), the project area is characterised by two different land types namely the Ea 20 and Da 1 land types. Ea land types consist of one or more of the following soils: Vertic, Melanic, and red structured diagnostic horizons, of which these soils are all undifferentiated. The Ba land types consist of plinthic catena with upland duplex and margalitic soils being rare and red soils being widespread.

The geology of the project area is characterised by the Madzaringwe Formation shale, mudstone and sandstone from the Karoo Supergroup or the Karoo Suite dolerites which feature prominently in this area. To the west, the rocks of Ventersdorp, old Transvaal and Witwatersrand Supergroups are significant with the south being characterised by the Volksrust Formation from the Karoo Supergroup. Additionally, basaltic igneous rocks from the Ventersdorp Supergroup's Klipriviersberg Group can be found in the area (Mucina and Rutherford, 2006).

3.1.4 Hydrological Characteristics

The PAOI falls within the Highveld Ecoregion, within the Vaal Water Management Area (WMA). At a finer scale, within the C22C quaternary catchment. The fine scale hydrological features are presented in the following section.

3.1.4.1 Topographical River Lines and Inland Water Areas

The topographical inland and river line data for the "2628" quarter degree indicated that no features were presented within the project site itself, however one dam was identified within the eastern PAOI (Figure 3-2). Furthermore, two non- perennial drainage features were identified in the PAOI (Figure 3-2).

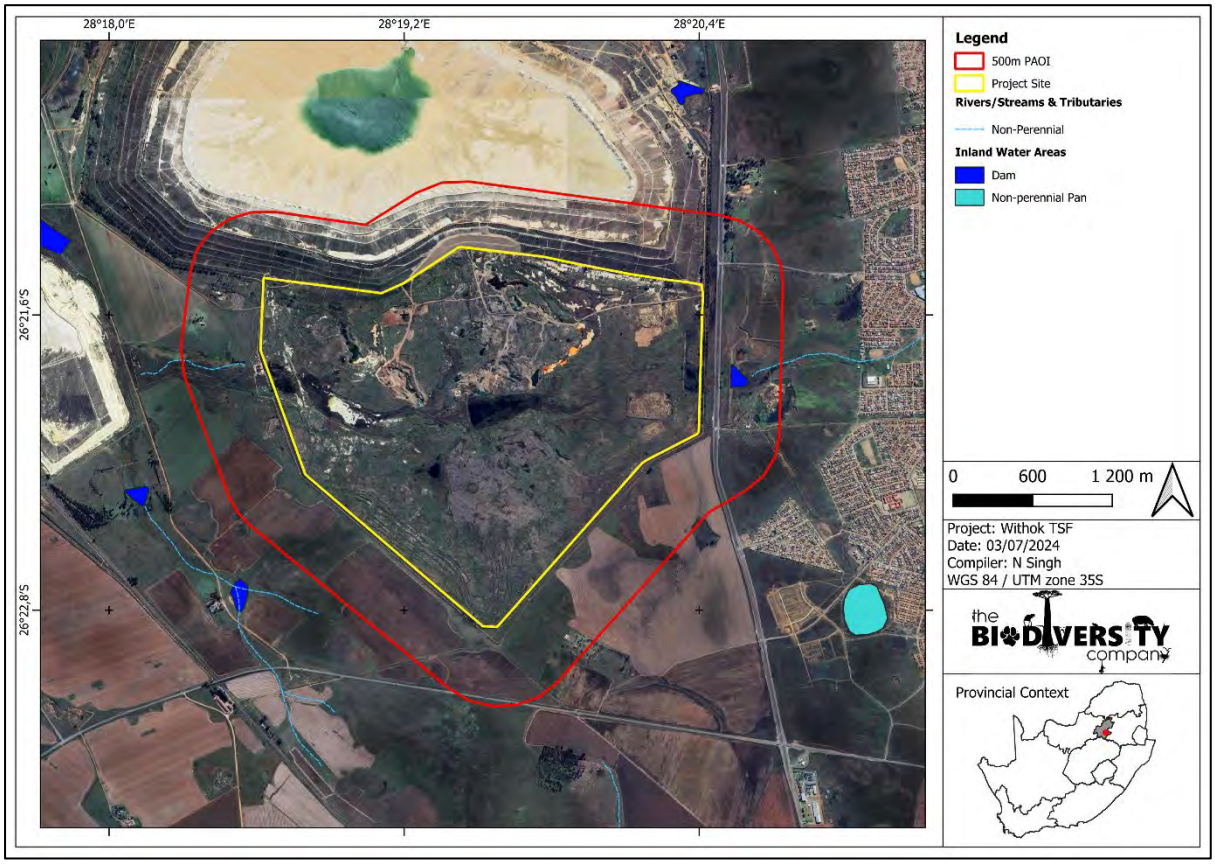


Figure 3-2 Topographical Inland Water Areas and River Lines that intersect the project area of influence

3.1.5 Ecologically Important Landscape Features

The GIS analysis pertaining to the relevance of the proposed project to ecologically important landscape features is summarised in Table 3-1. Only features that were identified to be relevant to the proposed project were further discussed.

Table 3-1 Summary of relevance of the proposed project to ecologically important landscape features

Desktop Information Considered	Relevant/Irrelevant	Section
South African Inventory of Inland Aquatic Ecosystems (SAIIAE)	Relevant – PAOI overlaps with SAIIAE wetlands.	3.1.5.1
National Freshwater Priority Area	Relevant – PAOI overlaps with NFEPA wetlands.	3.1.5.2
Provincial Conservation Plan	Relevant – PAOI overlaps with Protected, Ecological Support and Irreplaceable areas.	3.1.5.3
Strategic Water Source Areas	Irrelevant – PAOI does not overlap with a SWSA.	-

3.1.5.1 South African Inventory of Inland Aquatic Ecosystems

Three wetland types were identified within the PAOI, and classified as unchannelled valley-bottom, depression and seep systems (Figure 3-3). The seep and valley-bottom wetlands were all classified to have conditions within the “D/E/F – Largely/Seriously/Critically Modified” ranges and be “Critically Endangered” with regard to Ecosystem Threat Status. The valley-bottom was classified to be “Not Protected” and the seep was classified to be “Poorly Protected” with regard to Ecosystem Protection Level. Whereas the depression wetland was classified to have a condition within the “C – Moderately

Modified" class, be of "Least Concern" with regard to Ecosystem Threat Status and "Poorly Protected" with regard to Ecosystem Protection Level.

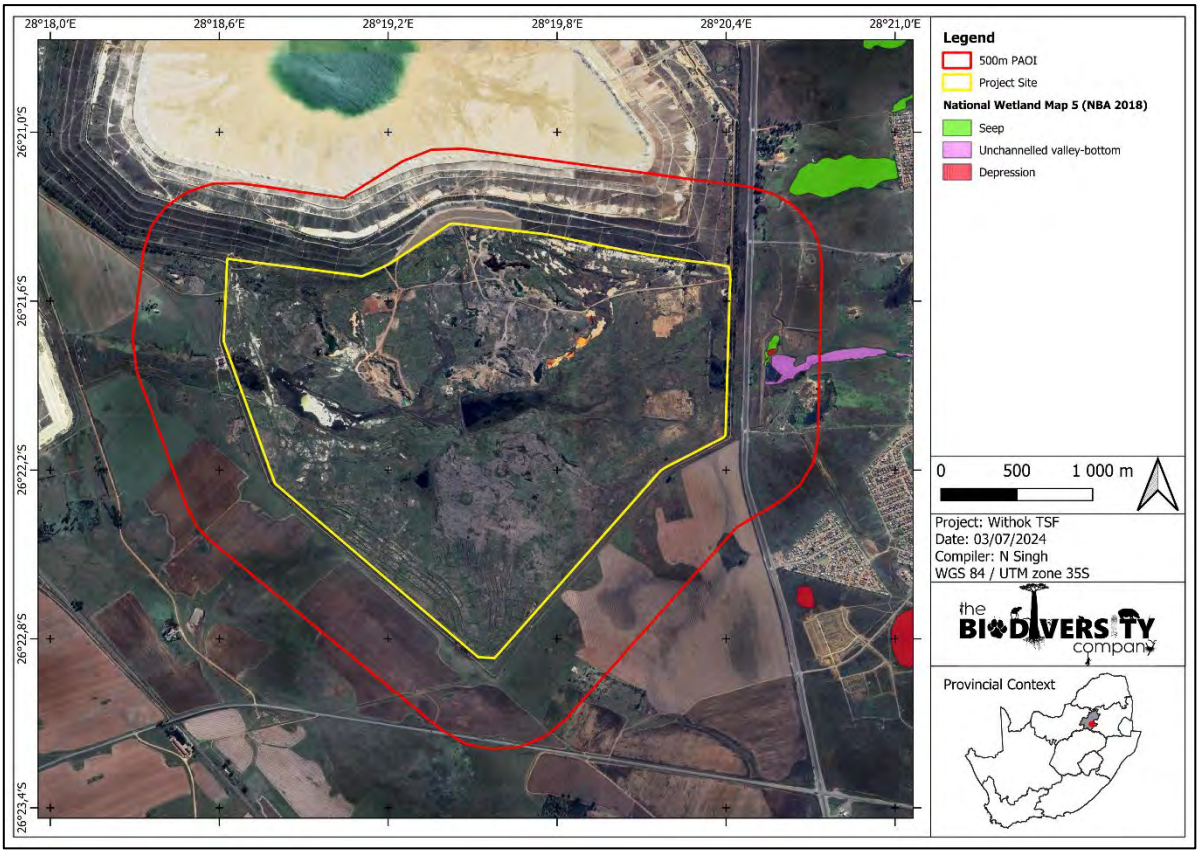


Figure 3-3 Wetland features identified within the project area of influence according to the South African Inventory of Aquatic Ecosystems dataset

3.1.5.2 National Freshwater Ecosystem Priority Ecosystems

One wetland type has been identified within the PAOI, namely three unchannelled valley-bottom wetlands (Figure 3-4). The NFEPA dataset recognises the eastern wetland features to be extensively modified systems presenting within the "Z3" condition category which refers to systems with less than 25% natural landcover remaining. Whereas the western wetland located within the project site was classified to have an "A/B – Natural/Largely Natural" condition.

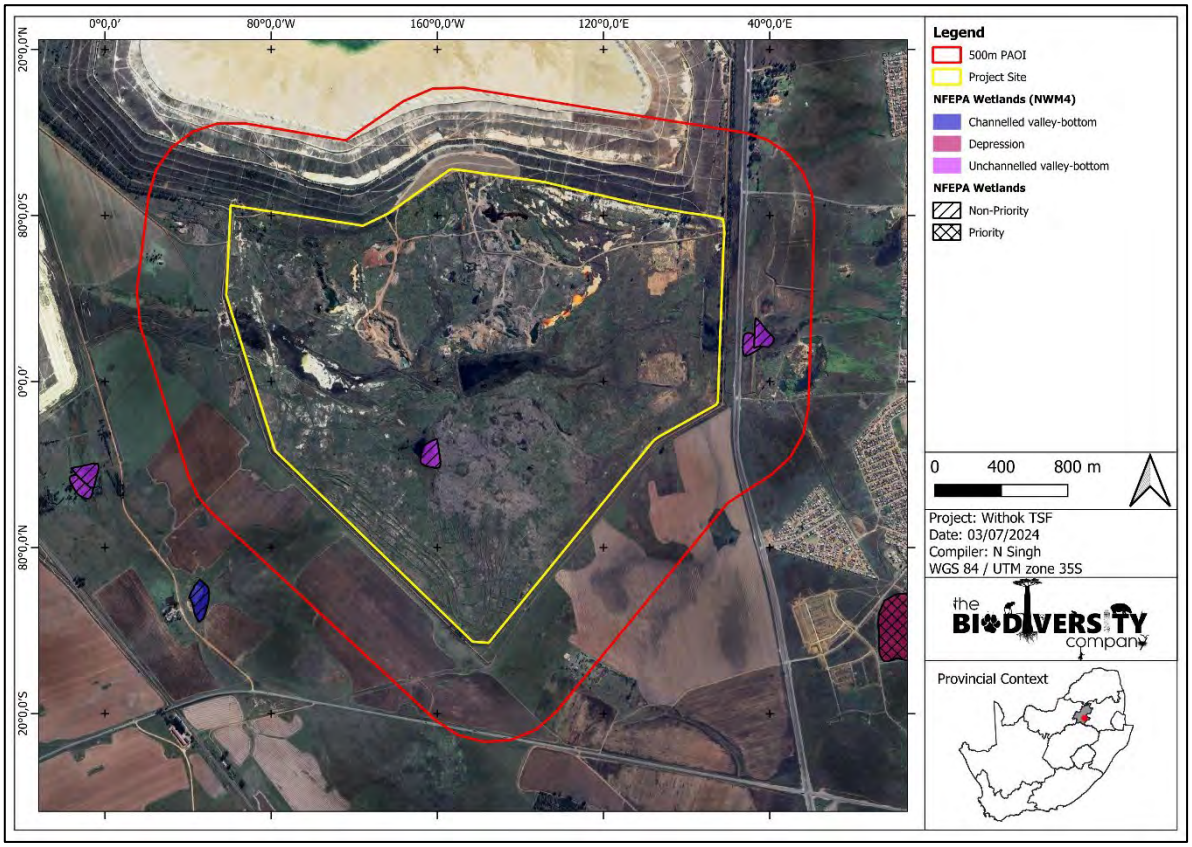


Figure 3-4 Wetland features identified within the project area of influence according to the National Freshwater Ecosystem Priority Ecosystems dataset

3.1.5.3 Gauteng Conservation Plan

The Gauteng Conservation Plan categorises portions of the PAOI as being an Ecological Support Areas and “CBA: Important Areas” (Figure 3-5). As displayed on the available satellite imagery, these areas tend to overlap with water resources.

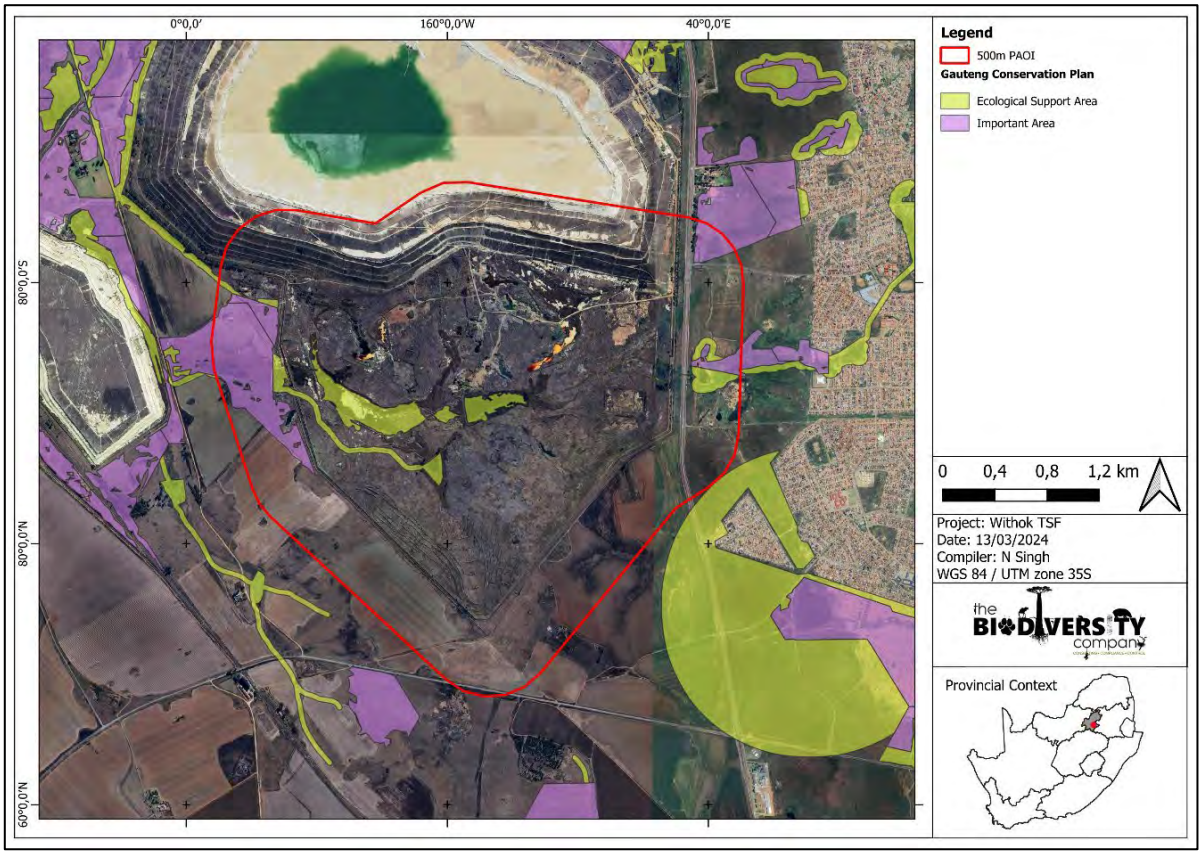


Figure 3-5 Gauteng Conservation Plan overlay for the project area of influence

3.2 Wetland Field Survey

3.2.1 Delineation

Wetland units have been grouped based on the HGM type and ecological condition. It is assumed that systems of the same type and that are positioned in a similar landscape setting are likely to provide similar ecological services.

Three (3) Hydrogeomorphic (HGM) units were identified within the encompassing 500 m PAOI. These were classified as; One (1) unchannelled valley-bottom and, two (2) seeps (Figure 3-6 and Figure 3-7).

Additionally, several artificial features were observed which are attributed to the nature of the historical land use (a TSF) and owing to extensive reshaping of the topography during the sites rehabilitation stages after decommissioning of the old TSF. The artificial seep features are a result of hydrological inputs via trenched drains from the adjacent Brakpan TSF. Other artificial areas include the dam features that occur within the path of the unchannelled valley-bottom and other depression features that are a result of continuous excavation.

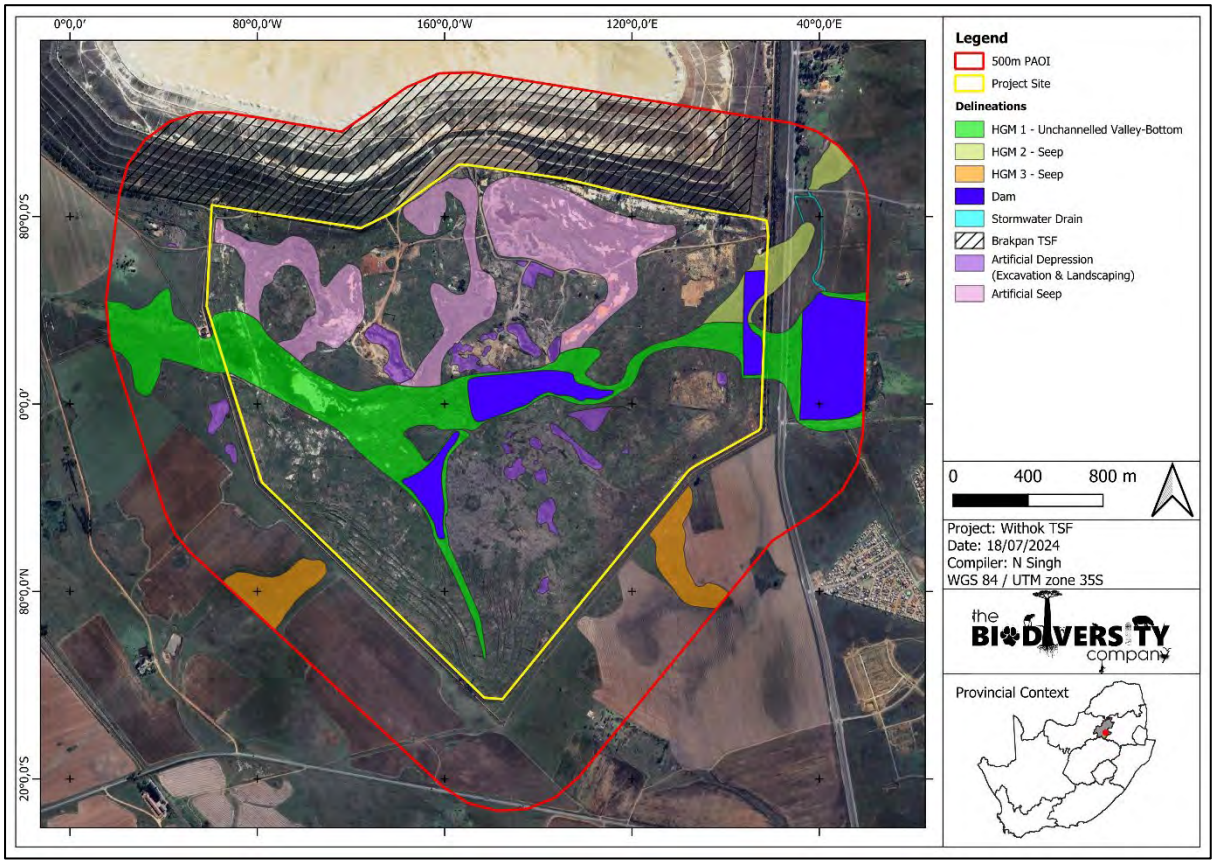


Figure 3-6 Delineation of wetland features within the project area of influence

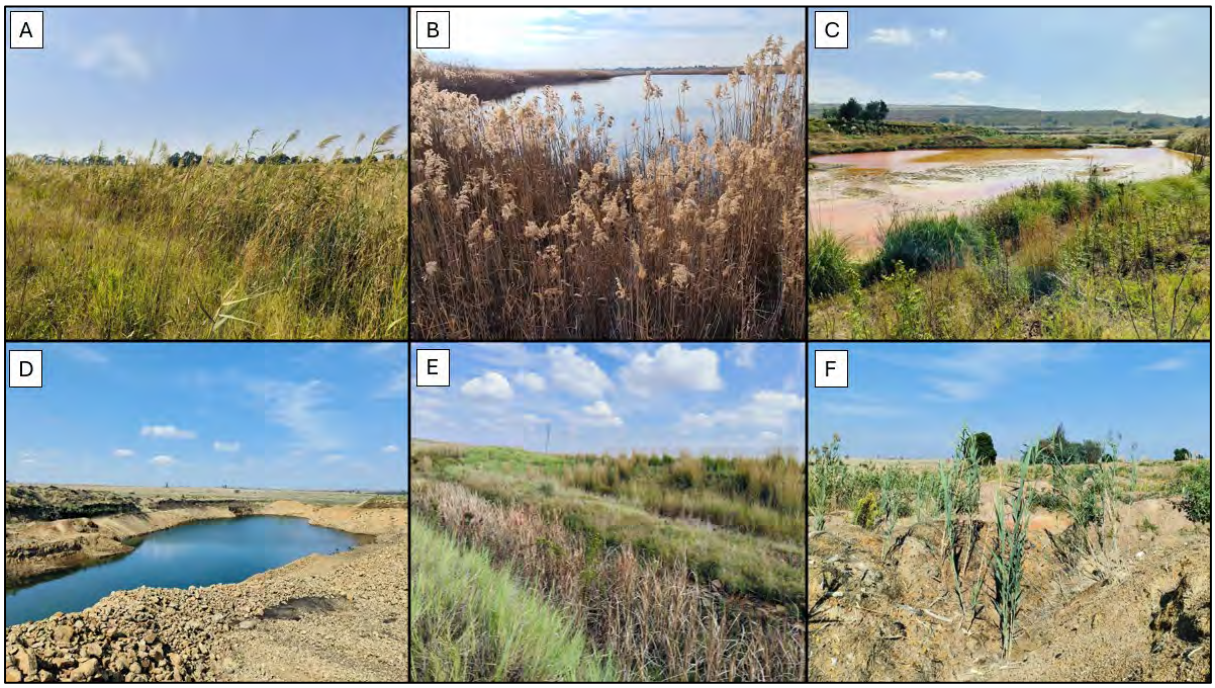


Figure 3-7 Representative photographs of the different wet areas within the project area. A) Unchannelled valley-bottom; B) Dam within unchannelled valley-bottom; C) Artificial seep; D) Excavated area; E) Drainage trench; & F) Disturbed areas resulting in artificial wetland conditions

3.2.2 Classification and Description

The wetland classification as per SANBI guidelines (Ollis *et al.,* 2013) is presented in Table 3-2.

Table 3-2 Wetland classification as per SANBI guideline (Ollis et al., 2013)

Wetland Unit	Level 1	Level 2		Level 3	Level 4		
	System	DWS Ecoregion/s	NFEPA Wet Veg Group/s	Landscape Unit	4A (HGM)	4B	4C
HGM 1	Inland	Highveld	Mesic Highveld Grassland Group 3	Valley Floor	Unchannelled valley-Bottom	N/A	N/A
HGM 2			Mesic Highveld Grassland Group 3	Slope	Seep	Without channelled outflow	N/A
HGM 3			Mesic Highveld Grassland Group 3	Slope	Seep	Without channelled outflow	N/A

Unchannelled valley-bottom wetlands are typically found on valley floors where the landscape does not allow high energy flows. Figure 3-8 presents a diagram of a typical unchannelled valley-bottom wetland, showing the dominant movement of water into, through and out of the system.

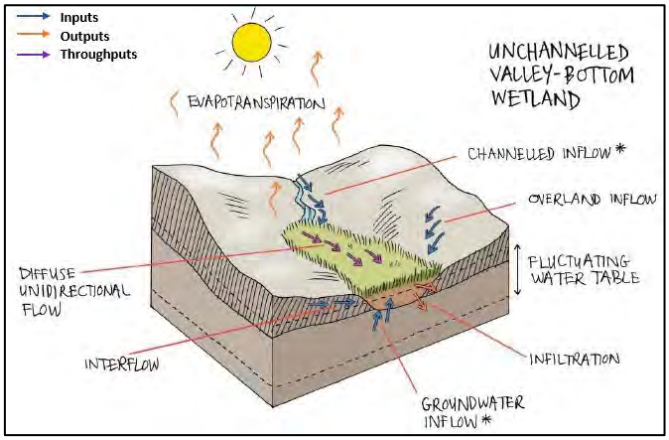


Figure 3-8 Amalgamated diagram of an unchannelled valley-bottom, highlighting the dominant water inputs, throughputs and outputs, SANBI guidelines (Ollis et al., 2013)

A typical hillslope seep is located on the slope terrain unit. Isolated hillslope seeps are characterised by colluvial movement of material. These systems are fed by very diffuse sub-surface flows which seep out at very slow rates, ultimately ensuring that no direct surface water connects this wetland with other water courses within the valleys. Figure 3-9 illustrates a diagram of the hillslope seeps, showing the dominant movement of water into, through and out of the system.

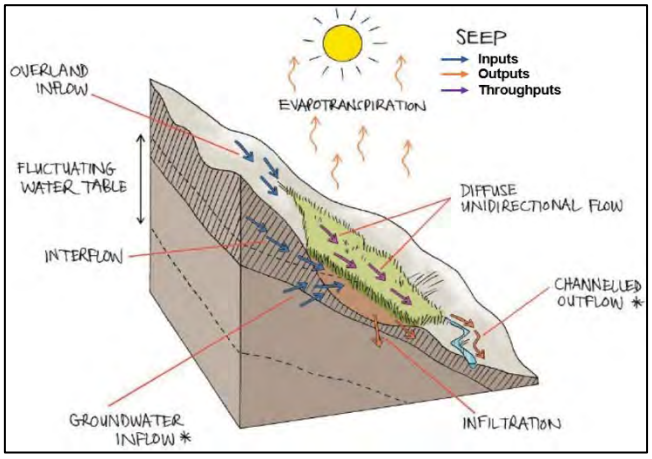


Figure 3-9 Amalgamated diagram of a seep wetland, highlighting the dominant water inputs, throughputs and outputs, SANBI guidelines (Ollis et al., 2013)

The DWAF (2005) manual separates the classification of watercourses into three (3) separate types of channels or sections defined by their position relative to the zone of saturation in the riparian area (Figure 3-10). The classification system separates channels into:

- those that do not have baseflow ('A' Sections);
- those that sometimes have baseflow ('B' Sections) or non-perennial; or
- those that always have baseflow ('C' Sections) or perennial.

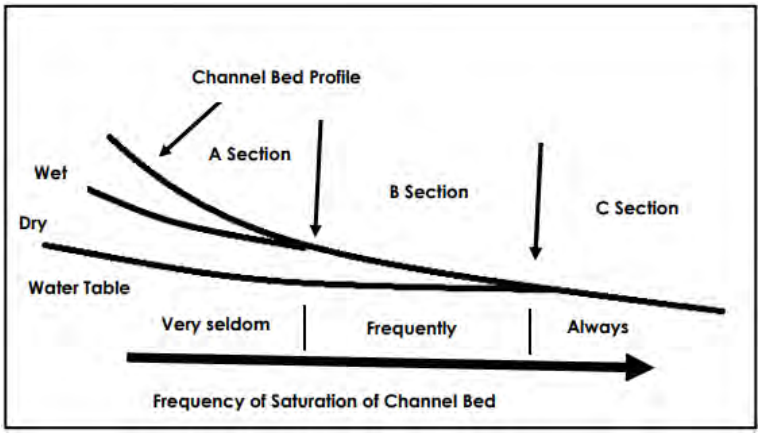


Figure 3-10 The watercourse classifications (DWAF, 2005)

3.2.3 Wetland Area

The total natural wetland area within the PAOI amounts to 120.15 ha (Table 3-3). It should be noted that 64.31 ha of wetland is directly intersected by the proposed site which amounts to 53.52% of the total wetland area delineated within the PAOI.

Table 3-3 Summary of natural wetland area within the project area of influence

HGM Units	Area within PAOI (Ha)	Percentage Cover (%)	Area directly intersected (Ha)
HGM 1	88.60	73.74	60.6
HGM 2	12.03	10.01	3.71
HGM 3	19.52	16.25	0

Total	120.15	100.00	64.31

3.2.4 Risk Screening

Table 3-4 and Figure 3-11 provides the results of risk screening for the delineated wetlands and provides motivation for each of the determined categories. All natural wetlands were identified to be "At Risk" from the proposed development activities.

Table 3-4 Risk status of the delineated wetlands

HGM unit	Risk Status	Rationale
HGM 1 HGM 2 HGM 3	At Risk	These HGM units were identified to wholly or partially overlap with the proposed development area and have therefore been determined as "At Risk". It is anticipated that direct impacts to the wetland system will occur. In terms of HGM 3 – the wetland does not overlap with the proposed area, but it is projected that indirect impacts relating to the hydrology of the system will result once a TSF has been established in the immediate catchment of the wetland.
Artificial features (dams, wetlands and drainage trenches)	Not Applicable	These are artificial systems which exhibit changes attributed to land use and human intervention. These areas are not understood to have natural sensitivity. Furthermore, in the absence of prior-state information these features cannot be assessed for ecological characteristics and therefore impact.

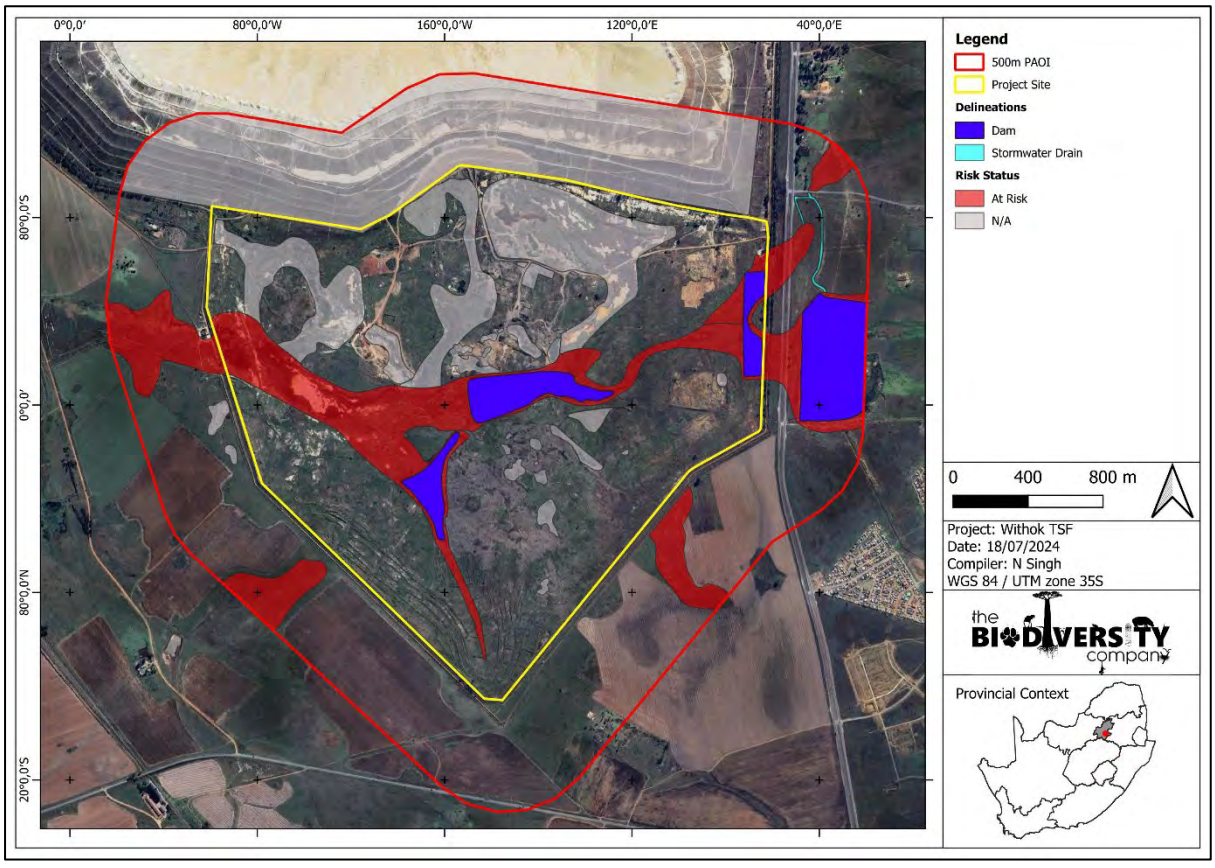


Figure 3-11 Risk status of the identified and delineated watercourse features

3.3 Wetland Functional and Ecological Assessment

Only natural systems were considered for further assessments; therefore, the off-channel dams do not form part of the assessments presented below. It should however be noted that instream dams were assessed as part of the wetland system they occur within.

3.3.1 Functional Assessment

3.3.1.1 General Functional Description

Unchanneled valley-bottoms are characterised by sediment deposition, a gentle gradient with streamflow generally being spread diffusely across the wetland, ultimately ensuring prolonged saturation levels and high levels of organic matter. The assimilation of toxicants, nitrates and phosphates are usually high for unchanneled valley-bottom wetlands, especially in cases where the valley is fed by sub-surface interflow from slopes. The shallow depths of surface water within this system adds to the degradation of toxic contaminants by means of sunlight penetration.

Hillslope seeps are well documented by (Kotze *et al.,* 2009) to be associated with sub-surface ground water flows. These systems tend to contribute to flood attenuation given their diffuse nature. This attenuation only occurs while the soil within the wetland is not yet fully saturated. The accumulation of organic material and sediment contributes to prolonged levels of saturation due to this deposition slowing down the sub-surface movement of water. Water typically accumulates in the upper slope (above the seep). Additionally, organic matter accumulation is essential in the denitrification process involved with nitrate assimilation. Seeps generally also improve the quality of water by removing excess nutrient and inorganic pollutants originating from agriculture, industrial or mine activities. The diffuse nature of flows ensures the assimilation of nitrates, toxicants and phosphates with erosion control being one of the ecosystem services provided in a limited capacity given the nature of a typical seep's position in the landscape.

It should be noted that these characteristics are representative of ideal wetland features and may not necessarily represent the characteristics of all wetlands. The functionality of wetlands and the provision of benefits is largely dependent on wetland size and influence from abiotic drivers.

3.3.1.2 Ecosystem Services

The ecosystem services provided by the relevant wetland units on site were assessed and rated using the WET-EcoServices method (Kotze *et al.,* 2008). The results of the assessment are presented in Table 3-5 and Figure 3-12. The ecosystem services scores of the delineated wetlands ranges from "Low" to "Intermediate". Ecosystem services contributing to these scores include flood attenuation, streamflow regulation, sediment trapping, phosphate assimilation, nitrate assimilation, toxicant assimilation, erosion control, and the maintenance of biodiversity.

Table 3-5 Summary of the average ecosystem scores of the assessed wetland units

Wetland Unit					HGM 1	HGM 2	HGM 3
Ecosystem Services Supplied by Wetlands	Indirect Benefits	Regulating and supporting benefits	Flood attenuation		4.0	1.0	0.5
			Streamflow regulation		2.0	1.0	0.5
			Water Quality enhancement benefits	Sediment trapping	2.0	1.0	1.0
				Phosphate assimilation	1.0	0.5	1.0
				Nitrate assimilation	1.0	0.5	1.0
				Toxicant assimilation	4.0	1.0	0.5
				Erosion control	2.0	1.0	1.0
			Carbon storage		1.0	0.5	0.2
	Direct Benefits	Biodiversity maintenance			2.5	1.0	1.0
		Provisioning benefits	Provisioning of water for human use		1.5	0.5	0.0
			Provisioning of harvestable resources		0.0	0.0	0.0
			Provisioning of cultivated foods		0.0	0.0	0.0

		Cultural benefits	Cultural heritage	0.0	0.0	0.0
			Tourism and recreation	0.0	0.0	0.0
			Education and research	0.5	0.5	0.5
Overall				21.5	8.5	7.2
Average				1.4	0.6	0.5
Class				Intermediate	Moderately Low	Low

Valley-bottom systems naturally have a higher benefit provision potential as they are larger systems with connectivity to wetlands located out of the project area but within the local catchment. Furthermore, valley-bottom systems often have high surface saturation levels with extensive hydrophytic vegetation cover. Their topographical position and presence of dams within the stream paths allows flood attenuation and the provisioning of water. The high vegetation density supports erosion control, sediment trapping and the assimilation of phosphates, nitrates and toxicants which enter the systems from surrounding agricultural fields and point source discharges such as mines. The high spatial connectivity, presence of surface water and vegetation density makes these systems important for the maintenance of biodiversity and habitat as they form ecological corridors in an extensively disturbed environment.

The seep wetlands provide benefits on a limited basis attributed to their size in relation to the level of modification. The benefits supplied in low capacity are related to enhancing water quality and relate to trapping sediments, erosion control and the assimilation of excess nutrients.

The wetlands are located in privately owned land which limits their potential to provide direct cultural and provisioning services due to the limited access and type of vegetation cover.

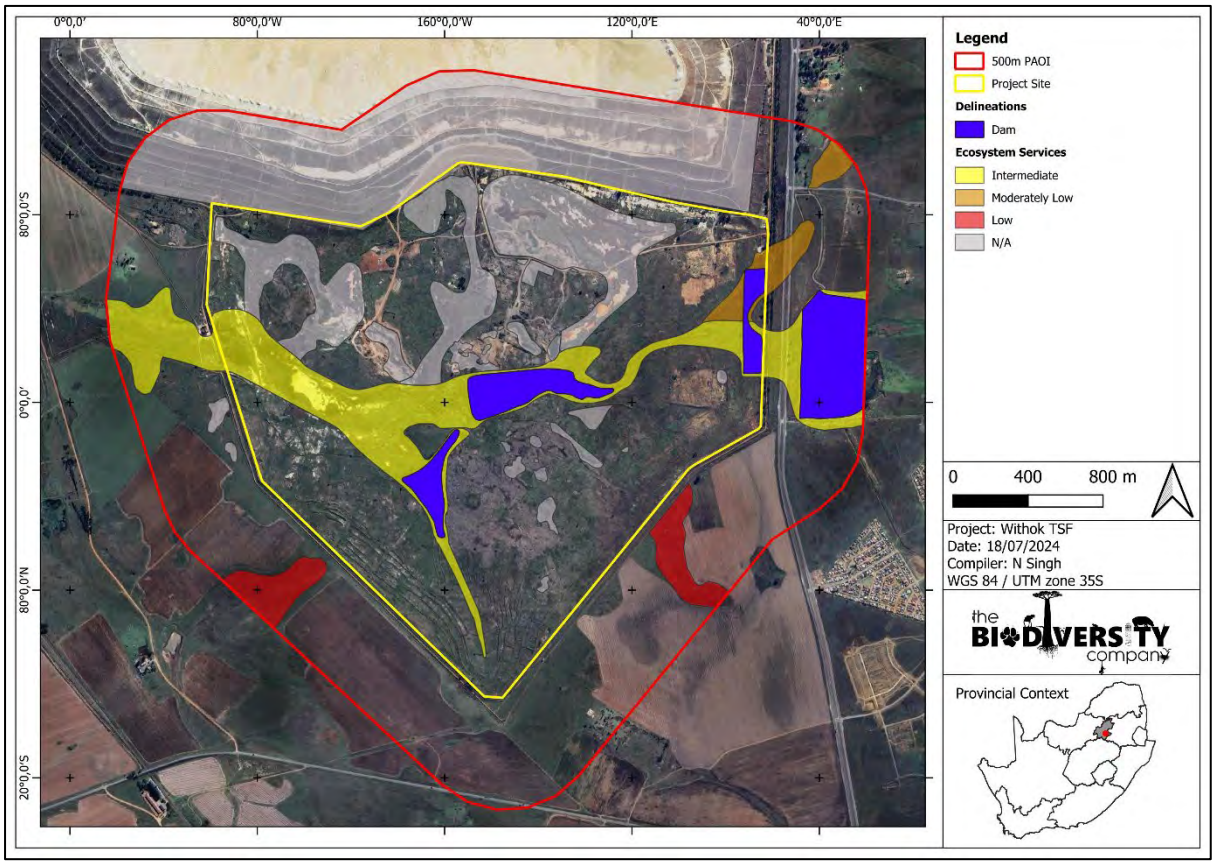


Figure 3-12 Average Ecosystem Service Classes of the assessed wetlands

3.3.2 Present Ecological State

The wetlands have exhibited modification resulting from natural physical changes as well as anthropogenically induced impacts at both the local and catchment level. Resultingly, the wetlands scored average Present Ecological State (PES) scores within the "C – Moderately Modified", "D – Largely Modified" and "E – Seriously Modified" PES classes. These impacts are further discussed in Section 4.1. The results of the wetland health and integrity assessment is provided in Table 3-6 and displayed in Figure 3-13.

Table 3-6 Average Present Ecological State scores for the assessed wetlands

Unit	PES Assessment	Hydrology	Geomorphology	Water Quality	Vegetation
HGM 1	Impact Score	5.9	4.0	6.5	7.9
	Ecological Category	D	C	E	E
	Combined Impact Score	6.0			
	Combined Ecological Category	E – Seriously Modified			
HGM 2	Impact Score	5.3	4.5	3.6	7.5
	Ecological Category	D	D	C	E
	Combined Impact Score	5.4			
	Combined Ecological Category	D – Largely Modified			
HGM 3	Impact Score	3.7	3.7	2.3	5.0
	Ecological Category	C	C	C	D
	Combined Impact Score	3.7			
	Combined Ecological Category	C – Moderately Modified			

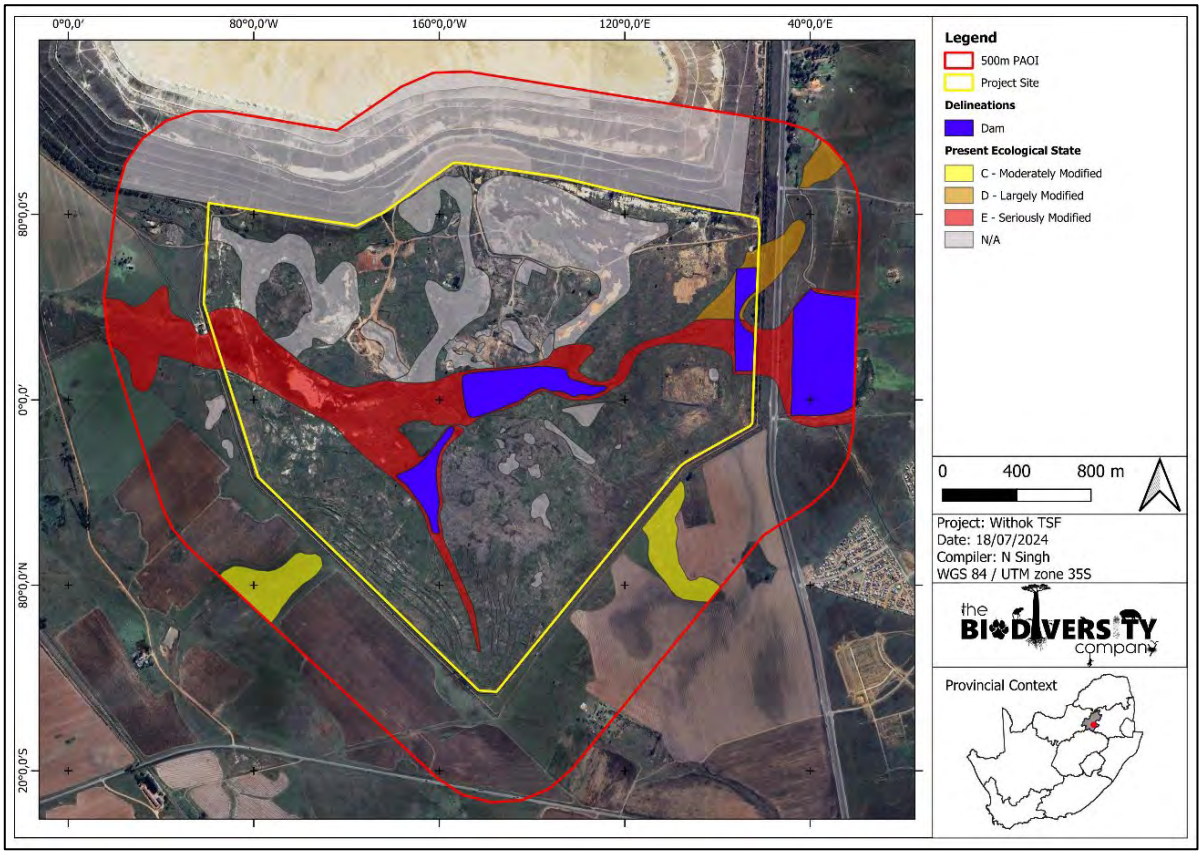


Figure 3-13 Present Ecological State Classes of the delineated wetlands

3.3.3 Ecological Importance and Sensitivity

The Ecological Importance and Sensitivity (EIS) assessment was applied to the HGM units in conjunction with the ecosystem service scores in the preceding sections, to assess the levels of sensitivity and ecological importance of the wetland. Various components pertaining to the protection status of a wetland is considered for the EIS, including Strategic Water Source Areas (SWSA), the NFEPA wet veg protection status and the protection status of the wetland itself considering the NBA wetland dataset (Table 3-7). It should be noted that each of the assessed wetlands overlap with different wetland vegetation groups as per the NFEPA dataset, therefore the dominant vegetation group per wetland was used to establish the ETS and EPL status for each wetland grouping. Furthermore, where wetland features were not recognised by the dataset, the closest available data was used to extrapolate findings.

The results of the assessment indicate that the wetlands present within the “Moderate” and “Low” EIS class. This is largely attributed to the overlapping of CBA and ESA areas with the wetlands as well as the high spatial connectivity of between the identified systems.

Table 3-7 Aspects considered in the Ecological Importance and Sensitivity assessment

HGM Type	NFEPA Wet Veg			NBA Wetlands			SWSA (Y/N)	CBA / ESA (Y/N)	EIS Class
	Type	Ecosystem Threat Status	Ecosystem Protection Level	Wetland Condition	Ecosystem Threat Status 2018	Ecosystem Protection Level			
HGM 1 Unchannelled valley-bottom	Mesic Highveld Grassland Group 3	Critically Endangered	Not Protected	E - Seriously Modified (Field Visit)	Critically Endangered	Not Protected	N	Y (ESA)	Moderate

HGM 2 Seep	Mesic Highveld Grassland Group 3	Critically Endangered	Not Protected	D - Largely Modified (Field Visit)	Critically Endangered	Poorly Protected	N	Y (ESA & CBA: Important Area)	Moderate
HGM 3 Seep	Mesic Highveld Grassland Group 3	Critically Endangered	Not Protected	C - Moderately Modified (Field Visit)	Critically Endangered	Poorly Protected	N	N	Low

3.3.4 Recommended Ecological Category and Recommended Management Objective

The Recommended Ecological Category (REC) and Recommended Management Objective (RMO) for the wetland areas was determined from the results of the PES and EIS assessments. These assessments indicated that all wetland features within the site, had to an extent, underwent transformation as a result of historical and current impacts. Nevertheless, despite the altered ecological integrity of these systems, they are considered to provide some important ecological services. Therefore, the RMO for all the systems are aimed at maintaining the systems health and functioning. The appropriate REC and RMO estimated for the wetland areas is presented in Table 3-8 below.

Table 3-8 Summary of the REC and RMO categories assigned to the relevant wetlands

Wetland Unit	REC - RMO
HGM 1	E - Maintain
HGM 2	D - Maintain
HGM 3	C - Maintain

3.4 Buffer Requirements

The buffer requirements for the wetlands were calculated using the Site-Based Tool: Determination of buffer zone requirements for wetland ecosystems (Macfarlane *et al.,* 2014). The recommended buffer zones are presented in Table 3-9 and Figure 3-14. The recommended pre-mitigation buffers for the wetlands in relation to the proposed project is 55 m. This considers that the topography of the adjacent catchment is characterised by minor gradual changes in elevation and much of the area has already been modified. With the implementation of mitigation measures a post-mitigation buffer of 35 m would be applicable.

The artificial features were not considered for buffers as these areas are not perceived to have natural ecological sensitivity.

Table 3-9 Buffer requirements for the relevant wetland features

Aspect	Buffer Distance
TSF	Pre-mitigation buffer - 55 m
	Post-mitigation buffer - 35 m

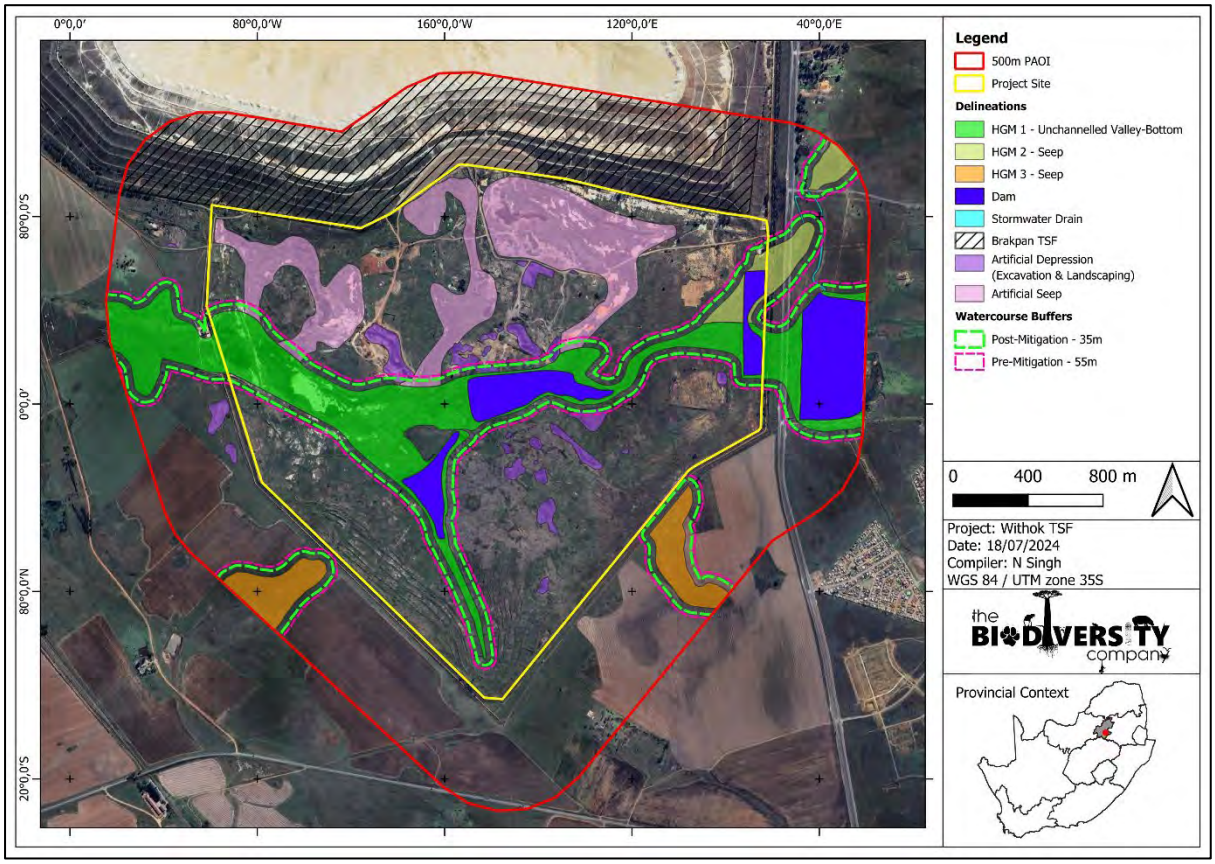


Figure 3-14 Recommended buffers for the identified wetlands in relation to the proposed development

3.4.1 Regulation Zones

Table 3-10 presents the legislated zones of regulation that would be applicable to the wetland areas.

In accordance with Government Notice (GN) 4167 of 2023 and GN 509 of 2016, as it relates to the NWA (1998), the regulated area of a watercourse for Section 21 (c) and 21 (i) of the NWA (1998) must be considered if the proposed development and associated infrastructure fall within the applicable zones of regulation as defined in the Act.

Listed activities in terms of the NEMA (1998), (Act 107 of 1998) EIA Regulations as amended in April 2017 must be taken into consideration if any infrastructure is to be placed within the applicable zone of regulation.

Both types of authorisations are applicable to the proposed project given that water resources were identified and are intersected by the proposed area for the TSF.

Table 3-10 Legislated zones of regulation

Regulatory authorisation required	Zone of applicability
Water Use License Application in terms of the National Water Act, 1998 (Act No. 36 of 1998). GN 4167 as published in the Government Gazette 49833 of 2023. GN 509 as published in the Government Gazette 40229 of 2016.	In accordance with GN 4167 of 2023 and GN 509 of 2016, as it relates to the National Water Act, 1998 (Act 36 of 1998), a regulated area of a watercourse in terms of water uses as listed in Section 21c and 21i is defined as: • the outer edge of the 1 in 100 year flood line and/or delineated riparian habitat, whichever is the greatest distance, measured from the middle of the watercourse of a river, spring, natural channel, lake or dam; • in the absence of a determined 1 in 100 year flood line or riparian area the area within 100 m from the edge of a watercourse where the edge of the watercourse is the first identifiable annual bank fill flood bench; or

	• a 500 m radius from the delineated boundary (extent) of any wetland or pan in terms of this regulation.
Environmental Authorisation in terms of the Listed activities of the National Environmental Management Act, 1998 (Act No. 107 of 1998). EIA Regulations (2014), as amended.	Activity 12 of Listing Notice 1 (GN 327) of the National Environmental Management Act, 1998 (Act No.107 of 1998) EIA regulations, 2014 (as amended) states that: The development of: (xii) Infrastructure or structures with a physical footprint of 100 square meters or more; Where such development occurs— Within a watercourse; In front of a development setback; or If no development setback has been adopted, within 32 meters of a watercourse, measured from the edge of a watercourse. … (dd) where such development occurs within an urban area… Activity 19 of Listing Notice 1 (GN 327) of the National Environmental Management Act, 1998 (Act No. 107 of 1998) EIA regulations, 2014 (as amended) states that: "The infilling or depositing of any material of more than 10 cubic meters into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10 cubic meters from a watercourse."

3.5 Site Sensitivity Verification

3.5.1 Desktop Ecological Sensitivity

The following is deduced from the National Web-based Environmental Screening Tool (Regulation 16(1)(v) of the Environmental Impact Assessment Regulations 2014, as amended):

- Aquatic Biodiversity Theme sensitivity as "Very High" for the PAOI (Figure 3-15), attributed to the presence of;
    - Freshwater Critical Biodiversity Areas;
    - Freshwater Ecological Support Areas; and
    - Seep, Depression and Valley-bottom wetlands (Mesic Highveld Grassland Bioregion).

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	CBA 1
Very High	ESA 1
Very High	ESA 2
Very High	Wetlands_Mesic Highveld Grassland Bioregion (Depression)
Very High	Wetlands_Mesic Highveld Grassland Bioregion (Seep)
Very High	Wetlands_Mesic Highveld Grassland Bioregion (Valley-bottom)

Figure 3-15 Aquatic Biodiversity Theme Sensitivity for the project area

3.5.2 Screening Tool Comparison

The allocated sensitivities for each of the relevant themes are either disputed or validated for the assessed areas as presented in Table 3-11 below and a sensitivity map showing the results of the sensitivity verification is presented in Figure 3-16. A summative explanation for each result is provided as relevant. The specialist-assigned sensitivity ratings are based largely on the ecological assessment processes followed in the previous section, and consideration is given to any observed or likely presence of sensitive fauna and flora.

Table 3-11 Summary of the screening tool vs specialist assigned sensitivities

Features	Screening Tool Theme	Environmental Screening Tool Sensitivity	Specialist Sensitivity	Tool Validated or Disputed by Specialist - Reasoning
Valley-bottoms	Aquatic Biodiversity Theme	Very High	Moderate	Screening Tool Sensitivity disputed. Rational for the specialist assigned 'Moderate' rating: These wetland areas are relatively large in size, exhibiting surface saturation in some approaches with the presence of hydrophytes. They have connectivity to other systems within the local catchment and are considered to be hydrological drivers to those systems. Although these systems have suffered historical impacts from anthropogenic influences, they provide habitat and a water source in a disturbed environment. The potential for them to support freshwater biodiversity therefore remains. The size, hydrological nature of the system and the provision of aquatic and wetland habitat increases its importance in the maintenance of biodiversity.
Seeps	Aquatic Biodiversity Theme	Very High	Moderate	Screening Tool Sensitivity validated. Rational for the specialist assigned 'Moderate' rating: Although much smaller, this wetland has connectivity to the valley-bottom. Whilst exhibiting impact from the surrounding residential development, the wetlands do have importance as a biodiversity corridor and as a hydrological driver for downstream systems in a limited capacity.
		Low	Low	Rational for the specialist assigned 'Low' rating: A wetland feature was identified within this area, but it has been modified by the agricultural fields. It is not expected that there is surface water present and the vegetation within the unit is not anticipated to increase its importance as a fully functional habitat.
Artificial Drainage Features and Artificial Wetlands	Aquatic Biodiversity Theme	Low	Low	Screening Tool Sensitivity validated. Rational for specialist assigned "Low" rating: The drainage features present as excavated trenches. These drainage features exhibit flows from the TSF, or when an exceptional amount of rainfall is experienced in a short period and. Whilst they do provide an exit point for attenuated surface runoff, the features are not perceived to contribute significantly to freshwater biodiversity and the water is directed to the return-water dams or artificially excavated areas. Most of the artificial seep wetlands are sustained by the artificial channelling mentioned above and are a result of human intervention which can be infilled; hence they are not considered to exhibit natural ecological sensitivity.
In-stream Dams	Aquatic Biodiversity Theme	Very High	Moderate	Screening Tool Sensitivity disputed. Rational for the specialist assigned 'Moderate' rating: These features occur within the stream path of wetlands and therefore have connectivity to the systems. They are perceived to play an important role in provisioning benefits and hydrodynamics of the downstream wetlands. Attributed to connectivity, the features will display the same ecological sensitivity as the wetland they occur in and as such have the potential to impact on these systems.
Remaining Area	Aquatic Biodiversity Theme	High	Low	Screening Tool Sensitivity Disputed. Rational for the specialist assigned 'Low' rating: A water feature was identified within this area, but it has been completely modified by the adjacent TSF and is now fully sustained by the hydrological inputs directed into the system. The vegetation of the system has also been extensively modified which has also led to an alteration of the type and quality of habitat that is provided.
		Low	Low	Screening Tool Sensitivity Validated. Rational for the specialist assigned 'Low' rating: Much of the PAOI has been historically modified through agricultural and mining activity and is not perceived to

				contribute significantly to freshwater resources apart from providing hydrological inputs. No natural wetlands were identified in these areas.

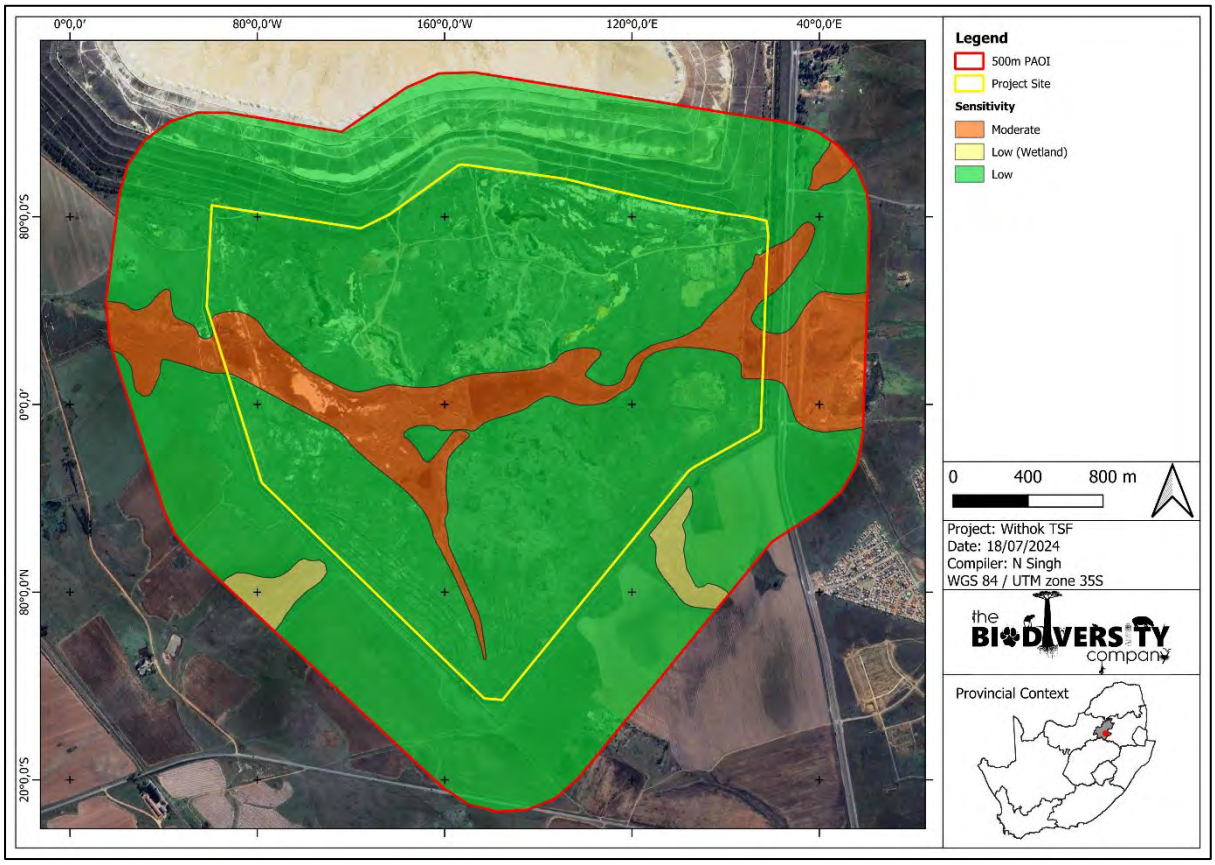


Figure 3-16 Sensitivity classification of the project area of influence and respective freshwater resources

4 Risk and Impact Assessment

4.1 Current Impacts to Freshwater Biodiversity

The list below refers to the present-day local impacts observed within the assessed wetland areas:

- Historical alterations to the natural hydrological regime due to the presence of croplands and other industrial uses;
- Alterations to hydrology and geomorphology through the development of TSF's and dams within the wetland catchment;
- Loss of vegetation through grazing pressure and cropland infringement;
- Impaired water quality from industrial effluents and agricultural runoff;
- Impeding flow within watercourse from informal and formal road crossings;
- Proliferation of alien invasive vegetation;
- Erosion of watercourses from altered hydrology and geomorphology; and
- Sedimentation of watercourses.

4.2 Alternatives Considered

No site alternatives were provided at this stage of the proposed project. Attributed to historical use of the land as a TSF and its proximity to other TSF's within the area, this is assumed to be the preferred site as opposed to identifying virgin soil areas for the proposed development.

4.3 Quantitative Risk and Impact Assessment

The Risk / Impact Assessment considered the direct and indirect impacts to the wetland systems. The mitigation hierarchy as discussed by the Department of Environmental Affairs (2013) will be considered for this component of the assessment (Figure 4-1). In accordance with the mitigation hierarchy, the preferred mitigatory measure is to avoid impacts by considering options in project location, sitting, scale, layout, technology and phasing to avoid impacts.

A risk assessment was conducted for the proposed development of the TSF (Table 4-2). For this assessment, it was assumed that the wetlands and their associated buffers cannot be avoided as the proposed area for the TSF intersects a valley-bottom system. Resultingly, the focus for mitigation was placed on minimising potential impacts.

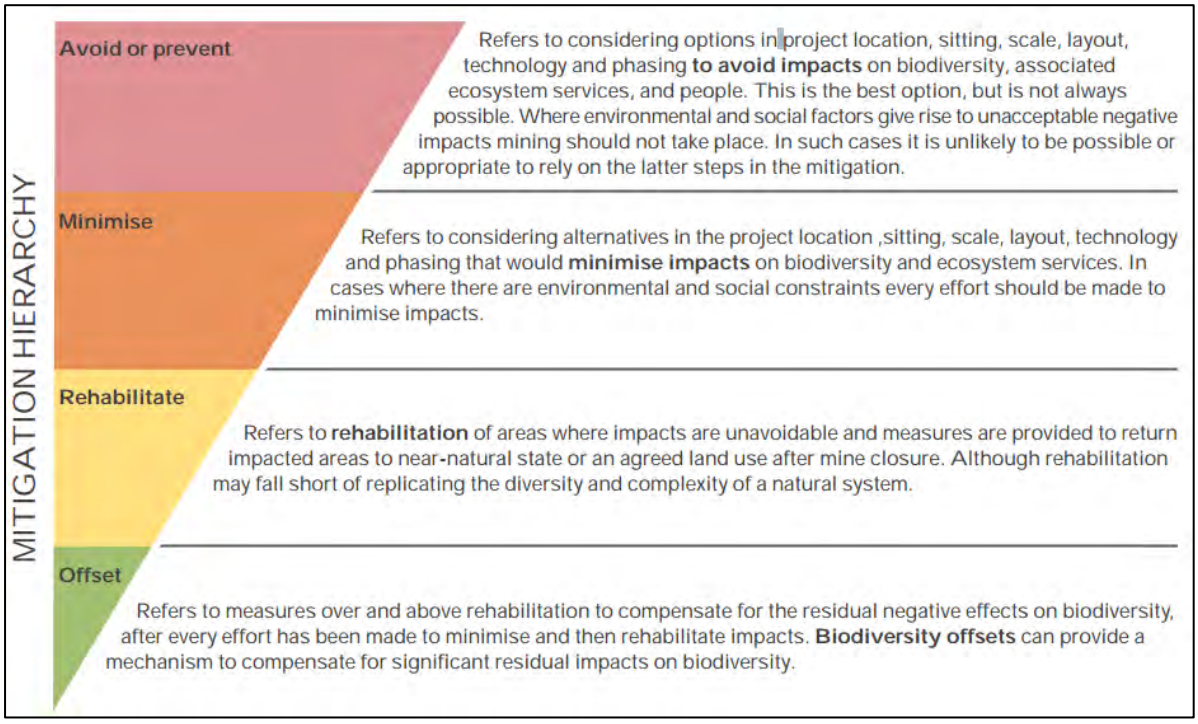


Figure 4-1 The mitigation hierarchy as described by the DEA (2013)

4.3.1 Potential Aniticipated Impacts

Table 4-1 illustrates the potential aspects expected to threaten the integrity of sensitive receptors during the proposed activities. The post-mitigation significance ratings have been calculated considering various parameters, these results are presented in the subsequent tables.

Table 4-1 Aspects and impacts relevant to the proposed activity

Phase	Activity	Expected Impacts
	Proposed TSF	
Construction phase	Clearing of vegetation and site preparation to facilitate the development of the TSF Excavating and reshaping for the Banks of the TSF Soil stockpiling Storage of chemicals, mixes and fuel Operation of heavy machinery and equipment within and in proximity to wetlands Installation and assembly of subsurface drainage systems Backfilling of residual excavated areas Dewatering excavated areas in relation to water accumulation from rainfall and stormwater management Ablution facilities	Impeding hydro-dynamics. Siltation of water resources. Erosion of water resources. Loss of indigenous vegetation. Altering hydromorphic soils. Altering hydrological regime. Direct loss of wetland areas. Proliferation of alien vegetation. Decrease in functionality. Additional water quality impairment.
Operational phase	Operation of TSF relating to consistent stockpiling of tailings material	Siltation of water resources. Erosion of water resources. Altering hydrological regime. Proliferation of alien vegetation. Wetland disturbance and decrease in functionality. Water quality impairment.
	Operation of drainage systems	

Decommissioning Phase	Dewatering of TSF compartments	Siltation of water resources. Erosion of water resources. Altering hydrological regime. Proliferation of alien vegetation. Wetland disturbance and decrease in functionality. Water quality impairment.
	Excavating and reshaping TSF to pre-construction state	
	Removal of TSF drainage systems	
	Rehabilitation of reworked area	
Cumulative Impact	All phases of the TSF project	Local wetland loss within the site and deterioration of wetland integrity beyond the project footprint.

Anthropogenic activities drive habitat destruction causing displacement of aquatic and terrestrial fauna and flora. Land clearing for development infrastructure (all inclusive) destroys local wildlife habitat and can lead to the loss of local breeding grounds, nesting sites and wildlife movement corridors such as rivers, streams and drainage lines and their associated riparian area, or other locally important features such as off channel wetlands (where present).

The risk assessment for the proposed TSF indicated that “Moderate” post-mitigation risks are expected during the construction and decommissioning phase, particularly in relation to wetland loss (for those systems located within the proposed TSF boundary and in consideration that these are only moderately sensitive wetlands) and altering the hydrological regime of the wetlands in proximity. It is anticipated that good implementation of the suggested mitigations will result in the risks relating to water quality impairments, erosion, sedimentation and wetland vegetation disturbance (including the proliferation of invasive alien plants) presenting in the “Low” post-mitigation category during the construction and decommissioning phases of the development for the remaining wetlands. Majority of the operational phase risks were rated as “Moderate” in the post-mitigation scenario and is attributed to the nature of the TSF which will inevitably result in altering the hydrological regime of the adjacent wetlands and adversely impacting on the water quality, especially seeing as the TSF will be in existence for an extended period of time, consequently resulting in longevity for the expected impacts. The risks associated with sedimentation and siltation during the operational phase can be mitigated to a larger degree and has therefore been rated as “Low”.

Table 4-2 Summative results of the DWS Risk Assessment conducted for the proposed activities

Phase	Activity	Impact	Significance (max = 100)	Risk Rating
CONSTRUCTION	Clearing of vegetation and site preparation to facilitate the development of the TSF	Loss of wetland area	57	M
		Altering surface flow patterns	36	M
		Erosion of surrounding landscape and subsequently the watercourses	24	L
		Sedimentation and siltation of watercourses	28,8	L
		Proliferation of invasive alien plants	24	L
	Excavating and reshaping for the Banks of the TSF	Altering surface and subsurface flow patterns	30	M
		Erosion of surrounding landscape and subsequently the watercourses	19,2	L

		Sedimentation and siltation of watercourses	24	L
	Soil stockpiling	Altering surface and subsurface flow patterns	18	L
		Erosion of surrounding landscape and subsequently the watercourses	14,4	L
		Sedimentation and siltation of watercourses	14,4	L
	Storage of chemicals, mixes and fuel	Impaired water quality from spills and leaks	10,8	L
	Operation of heavy machinery and equipment within and in proximity to wetlands	Altering surface flow patterns through hardened surfaces	24	L
		Erosion of surrounding landscape and subsequently the watercourses	19,2	L
		Sedimentation and siltation of watercourses	14,4	L
		Wetland vegetation disturbance and proliferation of invasive alien plants	14,4	L
		Impaired water quality from spills and leaks	10,8	L
	Installation and assembly of subsurface drainage systems	Altering surface and subsurface flow patterns	33	M
	Backfilling of residual excavated areas	Altering surface and subsurface flow patterns	24	L
		Erosion of surrounding landscape and subsequently the watercourses	19,2	L
		Sedimentation and siltation of watercourses	14,4	L
	Dewatering excavated areas in relation to water accumulation from rainfall and stormwater management and releasing water into the environment	Temporary alteration of hydrology within watercourse	19,2	L
		Erosion of watercourses from concentrated flows	19,2	L
		Sedimentation and siltation of watercourses	19,2	L
	Domestic and industrial waste	Wetland degradation	9,6	L
		Impaired water quality	10,8	L
	Ablution facilities	Impaired water quality from spills and leaks	16,2	L
OPERATIONAL	Operation of TSF relating to consistent stockpiling of tailings material	Altering surface and subsurface flow patterns	42	M
		Sedimentation and siltation of watercourses	28,8	L

		Impaired water quality from residual tailings materials entering the system	36	M
	Operation of drainage systems	Altering surface and subsurface flow patterns	42	M
		Sedimentation and siltation of watercourses	28,8	L
		Impaired water quality from residual tailings materials entering the system	36	M
DECOMMISSIONING	Dewatering of TSF compartments	Altering surface and subsurface flow patterns	33	M
		Sedimentation and siltation of watercourses	16,2	L
		Impaired water quality from residual tailings materials entering the system	16,2	L
	Excavating and reshaping TSF to pre-construction state	Altering surface and subsurface flow patterns	33	M
		Erosion of surrounding landscape and subsequently the watercourses	21,6	L
		Sedimentation and siltation of watercourses	21,6	L
	Removal of TSF drainage systems	Altering surface and subsurface flow patterns	33	M
		Sedimentation and siltation of watercourses	21,6	L
		Impaired water quality from residual tailings materials entering the system	21,6	L
	Rehabilitation of reworked area	Altering surface and subsurface flow patterns	33	M
		Sedimentation and siltation of watercourses	16,2	L
		Impaired water quality from residual tailings materials entering the system	27	L
		Proliferation of invasive alien plants	21,6	L

4.4 Mitigation Measures

In light of the expected impacts from proposed activities the following mitigation measures have been proposed to lower the intensity of the impacts on the ecological integrity of the wetland catchment and its downslope wetland features.

The focus of mitigation measures should be to reduce the significance of potential environmental impacts associated with the mixed land use development and thereby to:

- Undertake and implement a wetland offset strategy and rehabilitation plan to compensate for lost wetland areas;

- Prevent the unnecessary destruction of, and fragmentation, of the vegetation community of the wetland areas; and

- Limit the construction or working areas to the defined portions and only impact those areas where it is unavoidable to do so otherwise.

Table 4-3 Mitigation measures for the expected impacts of the proposed development

Impact	Measure
Direct loss, disturbance and degradation of wetlands	• Educate staff and relevant contractors on the location and importance of the identified wetlands through toolbox talks and by including them in site inductions as well as the making them aware of the overall site plan which should indicate sensitive areas, waste disposal areas and any other relevant project specifics. • Promptly control the spread of alien vegetation. • Landscape and re-vegetate all denuded areas as soon as possible. • Attempt by all means to limit the extent of HGM 1 and HGM 2 that will be lost by the proposed activities. Make sure that all the other HGM units and their buffers are avoided completely. • Adhere to the prescribed wetland buffers. Restrict all non-essential activities (e.g. cement mixing and equipment wetland machinery storage) to outside of wetlands and their prescribed buffers. • Contain wastewater in a PCD. Contaminated water must not be discharged into watercourses. • Demarcate the 10 m construction corridor as well as the prescribed m buffer on the ground (e.g. pained wooden poles). • Try to reduce the disturbance footprint and the unnecessary clearing of vegetation on either side of the TSF facility when traversing wetlands. • Construct as far as possible during winter when flow volumes are lowest, prioritise this for crossing sites. This will reduce impacts to wetlands due to soil poaching and vegetation trampling under peak saturation levels. Additionally, the risk of vehicles getting stuck and further degrading the vegetation integrity is lowest during this time.
Increased bare surfaces and potential for erosion	• Devise and implement a stormwater management plan. • Keep the TSF activities to the proposed site and only access the tailings facility from existing access points. • Ensure that the TSF is lined and secured to prevent runoff through rain. • Mixing of concrete must under no circumstances take place in any wetland or their buffers. Scrape the area where mixing and storage of sand and concrete occurred to clean once finished. • Do not situate any of the construction material laydown areas within any wetland. • No machinery should be allowed to parked in any wetlands. • Ensure topsoil is spread back over trench area. • Flatten and lightly till (no deeper than 30 cm) excavated / cleared areas to encourage vegetation establishment as soon as possible.
Sedimentation and siltation of watercourses	• Devise and implement a stormwater management plan. • Any water to be released into the environment from dewatering activities associated with temporary excavations during the construction must undergo filtration before it is released to minimise sediment laden water from entering the watercourses. • Install sandbags on downstream side of the footprint to trap sediment until the site has been constructed and vegetation has re-established. • Re-instate topsoil and lightly till disturbance footprint. • Exposed road surfaces awaiting grading, or other problematic areas must be stabilised to prevent the erosion of these surfaces.

	Signs of erosion must be addressed immediately to prevent further erosion. Temporary and permanent erosion control methods may include silt fences, flotation silt curtains, retention basins, detention ponds, interceptor ditches, seeding and sodding, riprap of exposed embankments, erosion mats, and mulching. • A combination of step like grassed berms or perforated bricks and silt traps must be placed in the preferential flow paths along the site and roads to prevent scouring of the road margins and subsequent sedimentation of the downslope water resources. • Avoid the creation of concentrated flow paths wherever possible; • Ensure soil stockpiles and concrete / building sand are sufficiently safeguarded against rain wash. • Any exposed earth should be rehabilitated promptly by planting suitable vegetation (vigorous indigenous grasses) to protect the exposed soil. • Where required, the rehabilitation of watercourse banks must take place following construction. Key areas where erosion has occurred should be rehabilitated through bank reprofiling to gentler gradients and the revegetation of the wetland periphery areas.
Proliferation of invasive alien plants	• Revegetate bare or denuded areas as soon as possible. • Once and if detected, control the spread of any existing colonies. • Avoid working in areas with alien vegetation as dispersal into unaffected areas may be aided through vehicular movement. • Should alien vegetation infestation be considered a contributing factor to ecosystem degradation on the site, the implementation of an alien invasive management plan should be considered.
Impaired water quality	• The use of herbicides is not recommended in or near wetlands to control alien vegetation (opt for mechanical removal). • Make sure all excess consumables and building materials / rubble is removed from site and deposited at an appropriate waste facility. • Appropriately contain any generator diesel storage tanks, machinery spills (e.g. accidental spills of hydrocarbons oils, diesel etc.) or construction materials on site (e.g. concrete) in such a way as to prevent them leaking and the wetlands. • Regularly maintain stormwater infrastructure, pipes, pumps and machinery to minimise the potential for leaks. Check for oil leaks, keep a tidy operation, install bins and promptly clean up any spills or litter. • Provide appropriate sanitation facilities during construction and service them regularly. • Have action plans on site, and training for contactors and employees in the event of spills, leaks and other impacts to the aquatic systems. The contractors used for the project should have spill kits available to ensure that any fuel or oil spills are clean-up and discarded correctly. • Stormwater and sediment control infrastructure must be regular maintained to ensure proper functionality and aim to release only clean water into the environment.
Alteration of hydrological regime	This impact cannot be fully mitigated due to the nature of the activity. The above-mentioned general mitigation relating to appropriate stormwater management, removal of alien vegetation and revegetation denuded areas will assist in alleviating some impact.

4.5 Cumulative Impacts

The quantitative impact of the proposed project in isolation on freshwater biodiversity is anticipated to be “High” given that wetland area will be lost and provided that the suggested mitigation measures are implemented for the remaining systems (Table 4-4). The cumulative impact of the proposed project on freshwater biodiversity is anticipated to be “Medium”. It should be noted that pre-existing modifications

to the wetland systems do exist and are attributed to similar land uses in the wetlands catchment therefore, the wetland's integrity and functionality conditions are not expected to deteriorate further as a result of the proposed activities (unless in the event where mitigation measures are unsuccessful).

A loss of freshwater biodiversity is anticipated at this stage. Furthermore, large-scale unpredictable contamination events, or dam failures that have a large impact magnitude and radius would inevitably result in the loss or degradation of numerous watercourses and resultingly in the loss of aquatic biodiversity.

***Table 4-4 Cumulative Impact Assessment for the** proposed activities*

Activity: Development and Operation of the TSF				
Impact and Nature: Cumulative habitat disturbance and degradation within the region. The development and operation of the tailings facility will inevitably result in wetland loss at a local level and some level of hydrological and water quality impact on the adjacent watercourses. Additionally, the increased water inputs and higher peak flows would lead to erosion within watercourses and sedimentation of watercourses with residual tailings materials. The potential for habitat disturbance in relation to freshwater resources which are designated as Critical Biodiversity Areas and/or Ecological Support Areas remains. Due to the natural connectivity of watercourses in the local catchment these impacts have the potential to extend beyond the project footprint and would theoretically be exacerbated when impacts of surrounding land uses and or similar projects are considered.				
	Project in Isolation		Cumulative Effects	
Extent	3	Local area	4	Regional
Duration	5	Permanent	5	Permanent
Magnitude	10	Very high and results in complete destruction of patterns and permanent cessation of processes	6	Moderate and will result in processes continuing but in a modified way
Probability	5	Definite (Impact will occur)	4	Highly probable (Most likely)
Significance	90	High	60	Medium
Status	Negative		Negative	
Reversibility	Low		Low	
Irreplaceable losses?	No		No	
Can impacts be mitigated?	Yes, for those systems that are not lost because of the development.			
Mitigation: All mitigations are critical as provided in section 4.4				
Residual Impacts: Long term modifications to watercourse flow regimes with subsequent potential for erosion and sedimentation and proliferation of alien vegetation within the local catchment. Water quality impairments are expected from the proposed activities irrespective of mitigation, mainly due to the high-risk nature of the tailing's storage facilities in relation to freshwater resources. Attributed to watercourse connectivity, disturbances to ecological corridors will result from the above-mentioned impacts.				

5 Conclusion

Three HGM units were identified within the encompassing 500 m PAOI. These were classified as; One unchannelled valley-bottom and, two seeps.

Additionally, several artificial features were observed which are attributed to the nature of the historical land use (a TSF) and owing to extensive reshaping of the topography during the sites rehabilitation stages after decommissioning of the old TSF. The artificial seep features are a result of hydrological inputs via trenched drains from the adjacent Brakpan TSF. Other artificial areas include the dam features that occur within the path of the unchannelled valley-bottom and depression features that are a result of continuous excavation.

Only natural features that were determined to be “At Risk” were considered for the ecological components of the assessment.

Table 5-1 Ecological characteristics and buffer requirements of the freshwater resources

HGM Unit / Feature	PES	EIS	Ecosystem Services	REC - RMO	Mitigated Buffer Requirement
1 – Unchannelled valley-bottom	E - Seriously Modified	C – Moderate	Intermediate	D - Maintain	35 m
2 – Seep	D - Largely Modified	C – Moderate	Moderately Low	C - Maintain	
3 – Seep	C - Moderately Modified	D – Low	Low	C - Maintain	

5.1 Risk and Impact Statement

A risk and impact assessment were conducted for the proposed project. The post-mitigation risks for the project presented within the “Low” and “Moderate” consequence and significance categories. This is largely attributed to the nature of the activities which are ‘high risk’ regarding freshwater resources. It is further anticipated that the cumulative impact of the proposed project in relation to freshwater resources will be “Medium” with the impact of the project in isolation being “High”, which considers the extensively industrialised catchment and the loss of wetland as a result of the project. Wetland loss will be further exacerbated in the event of a full tailings failure which would theoretically result in catastrophic loss of biodiversity in the local downstream catchment.

5.2 Specialist Opinion

Considering the assessment findings and the assumption that the suggested recommendations and mitigation measures will be implemented, no fatal flaws are evident for the proposed project at this stage. It is the opinion of the specialists that the project may be favourably considered for authorisation on condition that a wetland offset plan be undertaken and implemented for those systems that are lost resulting from the proposed activities.

6 References

Department of Water Affairs and Forestry (DWAF). 2005a. A Practical Field Procedure for Identification and Delineation of Wetlands and Riparian Areas.

Department of Water and Sanitation (DWS). 2005b. River Ecoclassification: Manual for Ecostatus Determination. First Draft for Training Purposes. Department of Water Affairs and Forestry.

Department of Water Affairs and Forestry (DWAF). 1999a. Appendix W4 of the DWAF Resource Directed Measures for Water Resources: Wetland Ecosystems. Department of Water Affairs and Forestry, Pretoria, South Africa.

Department of Water and Sanitation (DWS). 2016. General Authorisation in Terms of Section 39 of the National Water Act, 1998 (Act No. 36 of 1998) for water uses as defined in Section 21(c) or section 21(i). Government Gazette Notice: 509 in Government Gazette 40229 of 26 August 2016.

Department of Water and Sanitation (DWS). 2023. General Authorisation in Terms of Section 39 of the National Water Act, 1998 (Act No. 36 of 1998) for water uses as defined in Section 21(c) or section 21(i). Government Gazette Notice: 4167 in Government Gazette 49833 of 08 December 2023.

GDARD. 2014. Technical Report for the Gauteng Conservation Plan (Gauteng C-Plan v3.3). Gauteng Department of Agriculture and Rural Development: Nature Conservation Directorate. 60 pages.

Kotze, D.C., Marneweck, G.C., Batchelor, A.L., Lindley, D.C., and Collins, N.B. 2009. A Technique for rapidly assessing ecosystem services supplied by wetlands, Mondi Wetland Project.

Land Type Survey Staff. 1972 - 2006. Land Types of South Africa: Digital Map (1:250 000 Scale) and Soil Inventory Databases. Pretoria: ARC-Institute for Soil, Climate, and Water.

Lotter, M.C., Le Maitre, D. 2021. Fine-scale delineation of Strategic Water Source Areas for surface water in South Africa using Empirical Bayesian Kriging Regression Prediction: Technical report. Prepared for the South African National Biodiversity Institute (SANBI), Pretoria. 33p.

Macfarlane, D.M., Bredin, I.P., Adams, J.B., Zungu, M.M., Bate, G.C. and Dickens, C.W.S. 2014. Preliminary guideline for the determination of buffer zones for rivers, wetlands and estuaries. Final Consolidated Report. WRC Report No TT 610/14, Water Research Commission, Pretoria.

Macfarlane, D.M., Kotze, D.C., Ellery, W.N., Walters, D., Koopman, V., Goodman, P. and Goge, C. 2007. A technique for rapidly assessing wetland health: WET-Health. WRC Report TT 340/08.

Mucina, L., and Rutherford, M.C., 2010. The vegetation of South Africa, Lesotho and Swaziland. Strelizia 19. South African National Biodiversity Institute, Pretoria South African.

Nel, J. L., Driver, A., Strydom, W. F., Maherry, A. M., Petersen, C. P., Hill, L., Roux, D. J., Nienaber, S., van Deventer, H., Swartz, E. R. & Smith-Adao, L. B. (2011). Atlas of Freshwater Ecosystem Priority Areas in South Africa: Maps to support sustainable development of water resources, WRC Report No. TT 500/11. Water Research Commission, Pretoria.

Nel JL, Murray KM, Maherry AM, Petersen CP, Roux DJ, Driver A, Hill L, Van Deventer H, Funke N, Swartz ER, Smith-Adao LB, Mbona N, Downsborough L and Nienaber S. 2011. Technical Report for the National Freshwater Ecosystem Priority Areas project. WRC Report No. K5/1801.

Ollis DJ, Snaddon CD, Job NM, and Mbona N. 2013. Classification System for Wetlands and other Aquatic Ecosystems in South Africa. User Manual: Inland Systems. SANBI Biodiversity Series 22. South African Biodiversity Institute, Pretoria.

Rountree, M. & Kotze, D. 2013. Ecological Importance and Sensitivity Assessment. In: Rountree, M., Malan, H. & Weston. ed., Manual for the Rapid Ecological Reserve Determination of Inland Wetlands.

Report to the Water Research Commission and Department of Water Affairs. WRC Report No. 1788/1/12. Pretoria. p. 42-46.

Soil Classification Working Group. 2018. Soil Classification A Taxonomic system for South Africa. Pretoria: The Department of Agricultural Development.

Van Deventer, H.; Smith-Adao, L.; Mbona, N.; Petersen, C.; Skowno, A.; Collins, N.B.; Grenfell, M.; Job, N.; Lötter, M.; Ollis, D.; Scherman, P.; Sieben, E.; Snaddon, K. 2018. South African Inventory of Inland Aquatic Ecosystems. South African National Biodiversity Institute, Pretoria. Report Number: CSIR report number CSIR/NRE/ECOS/IR/2018/0001/A; SANBI report number http://hdl.handle.net/20.500.12143/5847.

7 Appendix Items

7.1 Appendix A – Methodology

7.1.1 Desktop Dataset Assessment

The desktop assessment was undertaken using Geographic Information System (GIS) to access, view and overlay the latest available related datasets with the project area. The information represented within the datasets was used to develop the relevant digital maps used to identify potentially environmentally sensitive areas. These datasets and their respective dates of publishing are provided below:

- Vegetation Types - Vegetation Map of South Africa, Lesotho and Swaziland (SANBI, 2018 & Mucina and Rutherford 2006);
- Soils and Geology - Land Types Database (Land Type Survey Staff, 1972 - 2006); and
- Topographical Inland Water Areas and River Lines (based on the 1994 1:500 000 topographic maps as per the Chief Directorate of the National Geo-spatial Information).

7.1.1.1 Vegetation Types - Vegetation Map of South Africa, Lesotho and Swaziland

The Vegetation Map of South Africa, Lesotho and Swaziland (SANBI, 2018) is the latest and updated version of the maps published in earlier time such as those presented by Mucina and Rutherford (2006) and those presented in the National Biodiversity Assessment (2011). The map provides spatial details on the representative vegetation of South Africa and is complemented in this report using information from Strelitzia (Mucina & Rutherford, 2006) to provide insight on the landscape features, biogeography, climate, geology, and soils of the project area.

7.1.1.2 Soils and Geology - Land Type Database

The Land Type Survey provides information on the soils, terrain, climate, and geology of areas within South Africa. The data includes the pedological classification of soils and is used in this report to provide insight on the common soil forms associated with aquatic or freshwater systems of a particular area.

7.1.1.3 Topographical River Lines and Inland Water Areas

Topographical Inland Water Areas and River Lines for South Africa are based on the topographic maps dated 1994 as per the National Geo-spatial Information. These datasets are used in this report to provide insight on potential wetland areas and serves to highlight the location and extent of drainage features, dams, wetlands, reservoirs and other relevant inland waterbodies.

7.1.1.4 Ecologically Important Landscape Features

The datasets listed below were incorporated to establish the relation between the project and ecologically important or sensitive freshwater entities. Emphasis was placed around the following spatial datasets:

- South African Inventory of Inland Aquatic Ecosystems (SAIIAE), NBA 2018 Rivers and Wetlands (Van Deventer *et al.,* 2019);
- National Freshwater Priority Areas, Rivers and Wetlands, 2011 (Nel *et al.,* 2011);
- Strategic Water Source Areas, 2021 (Lötter & Le Maitre, 2021);
- Gauteng Conservation Plan (GDARD, 2014); and

- The Convention on Wetlands (Ramsar Secretariat, 2014).

7.1.1.4.1 The South African Inventory of Inland Aquatic Ecosystems

The South African Inventory of Inland Aquatic Ecosystems (SAIIAE) was established during the 2018 NBA, the SAIIAE is a collection of spatial data layers that represent the extent of river and inland wetland ecosystem types as well as the pressures on these systems. The same two headline indicators, and their associated categorisations, are applied as with the terrestrial ecosystem NBA, namely Ecosystem Threat Status and Ecosystem Protection Level. The Ecosystem Threat Status of river and wetland ecosystem types are based on the extent to which each ecosystem type had been altered from its natural condition.

7.1.1.4.2 National Freshwater Ecosystem Priority Areas, Rivers and Wetlands

In an attempt to better conserve aquatic ecosystems, South Africa has categorised its inland aquatic 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). The FEPAs are intended to be conservation support tools and it is envisioned that they will guide the effective implementation of measures to achieve the National Environment Management: Biodiversity Act's biodiversity conservation goals (Nel *et al.,* 2011).

7.1.1.4.3 Strategic Water Source Areas

SWSAs are defined as areas of land that supply a disproportionate quantity of mean annual surface water runoff in relation to their size, and therefore contribute considerably to the overall water supply of the country, as well as national aquatic and terrestrial biodiversity resources. These are considered key ecological infrastructure assets and the effective protection of SWSAs is vital for national security because a lack of water security will compromise national security and human wellbeing on all levels.

7.1.1.4.4 Gauteng Conservation Plan

The final spatial outcome of the systematic conservation planning process (ie. The Gauteng C-Plan) is a map that delineates biodiversity priority areas for conservation and sustainable land use management. The map, which is commonly referred to as a Critical Biodiversity Areas or CBA Map, identifies biodiversity priority areas in a number of major categories (GDARD, 2014):

- Protected Areas;
- Critical Biodiversity Areas; and
- Ecological Support Areas

Protected Areas (PA): Protected Areas are areas which have legal protection under relevant legislation, or which are managed with a primary conservation objective. Importantly, the Protected Area definition used, and the areas included in Gauteng C-Plan v3.3 deviate from those typically used in other South African conservation plans, as the key criteria used to guide inclusion or exclusion is the type of conservation management applied in an area rather than its legal status. For example, World Heritage Sites and Protected Environments are not considered to be Protected Areas while certain undeclared conservation areas are included. Refer to Section 4 for the detailed PA definitions.

Critical Biodiversity Areas (CBAs): CBAs include natural or near-natural terrestrial and aquatic features that were selected based on an area's biodiversity characteristics, spatial configuration and requirement for meeting both biodiversity pattern and ecological process targets. CBAs include irreplaceable sites where no other options exist for meeting targets for biodiversity features, as well as best-design sites which represent an efficient configuration of sites to meet targets in an ecologically sustainable way that is least conflicting with other land uses and activities. These areas need be

maintained in the appropriate condition for their category. Some CBAs are degraded or irreversibly modified but are still required for achieving specific targets, such as cultivated lands for threatened species.

Ecological Support Areas (ESAs): Natural, near natural, degraded or heavily modified areas required to be maintained in an ecologically functional state to support Critical Biodiversity Areas and/or Protected Areas. ESAs maintain the ecological processes on which Critical Biodiversity Areas and Protected Areas depend. Some ESAs are irreversibly modified but are still required as they still play an important role in supporting ecological processes.

7.1.2 Wetland Field Survey

7.1.2.1 Identification and Mapping

The wetland areas were delineated in accordance with the DWAF (2005) guidelines, a cross section is presented in Figure 7-1. The outer edges of the wetland areas were identified by considering the following four specific indicators:

- The Terrain Unit Indicator helps to identify those parts of the landscape where wetlands are more likely to occur;
- The Soil Form Indicator identifies the soil forms, as defined by the Soil Classification Working Group (1991), which are associated with prolonged and frequent saturation.
- The soil forms (types of soil) found in the landscape were identified using the South African soil classification system namely; Soil Classification: A Taxonomic System for South Africa (Soil Classification Working Group, 1991);
- The Soil Wetness Indicator identifies the morphological "signatures" developed in the soil profile as a result of prolonged and frequent saturation; and
- The Vegetation Indicator identifies hydrophilic vegetation associated with frequently saturated soils.

Vegetation is used as the primary wetland indicator. However, in practise the soil wetness indicator tends to be the most important, and the other three indicators are used in a confirmatory role.

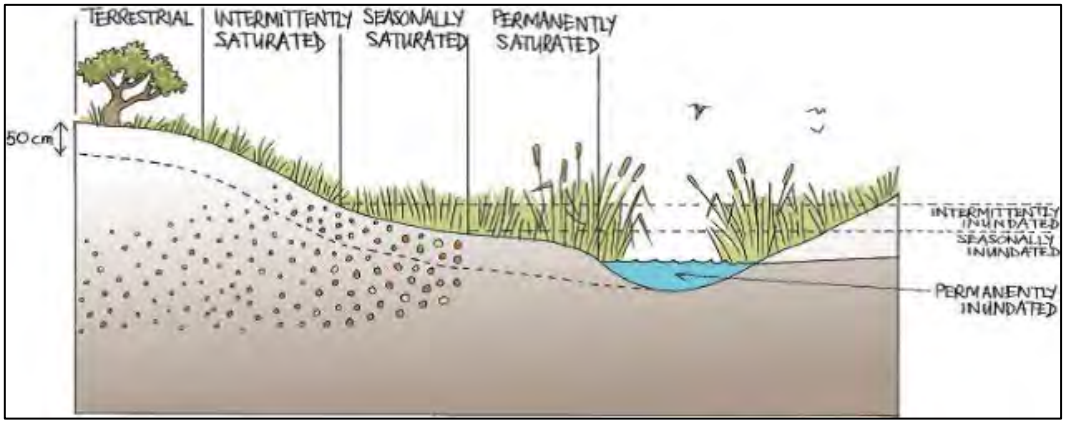


Figure 7-1 Cross section of a wetland, indicating how the soil wetness and vegetation indicators respond to changes in topography (Ollis et al. 2013)

7.1.2.2 Delineation

The wetland indicators described above are used to determine the boundaries of the wetlands within the project area. These delineations are then illustrated by means of maps accompanied by descriptions.

7.1.2.3 Classification and Description

The National Wetland Classification Systems (NWCS) developed by the South African National Biodiversity Institute (SANBI) will be considered for this study. This system comprises a hierarchical classification process of defining a wetland based on the principles of the hydrogeomorphic (HGM) approach at higher levels, and then also includes structural features at the lower levels of classification (Ollis *et al.,* 2013).

7.1.2.4 Risk Screening

A risk screening procedure which considers the general topography of the proposed area in conjunction with the spatial proximity of the natural wetlands to the proposed areas of development was used to determine the 'Risk Status' of the delineated wetlands. Two broad categories are included in the screening process which classify wetlands to be 'At Risk' or 'Not at Risk'.

7.1.3 Wetland Functional and Ecological Assessment

7.1.3.1 Functional Assessment

Wetland Functionality refers to the ability of wetlands to provide healthy conditions for the wide variety of organisms found in wetlands as well as humans. Eco Services serve as the main factor contributing to wetland functionality.

The assessment of the ecosystem services supplied by the identified wetlands was conducted per the guidelines as described in WET-EcoServices (Kotze *et al.,* 2009). An assessment was undertaken that examines and rates the following services according to their degree of importance and the degree to which the services are provided (Table 7-1).

Table 7-1 Classes for determining the likely extent to which a benefit is being supplied

Score	Rating of likely extent to which a benefit is being supplied
< 0.5	Low
0.6 - 1.2	Moderately Low
1.3 - 2.0	Intermediate
2.1 - 3.0	Moderately High
> 3.0	High

7.1.3.2 Present Ecological Status

The overall approach as described by Macfarlane *et al.,* 2009, is to quantify the impacts of human activity or clearly visible impacts on wetland health, and then to convert the impact scores to a Present Ecological Status (PES) score. This takes the form of assessing the spatial extent of impact of individual activities/occurrences and then separately assessing the intensity of impact of each activity in the affected area. The extent and intensity are then combined to determine an overall magnitude of impact. The Present State categories are provided in Table 7-2.

Table 7-2 The Present Ecological Status categories (Macfarlane et al., 2007)

Impact Category	Description	Impact Score Range	PES

None	Unmodified, natural	0 to 0.9	A
Small	Largely Natural with few modifications. A slight change in ecosystem processes is discernible and a small loss of natural habitats and biota may have taken place.	1.0 to 1.9	B
Moderate	Moderately Modified. A moderate change in ecosystem processes and loss of natural habitats has taken place, but the natural habitat remains predominantly intact.	2.0 to 3.9	C
Large	Largely Modified. A large change in ecosystem processes and loss of natural habitat and biota has occurred.	4.0 to 5.9	D
Serious	Seriously Modified. The change in ecosystem processes and loss of natural habitat and biota is great, but some remaining natural habitat features are still recognizable.	6.0 to 7.9	E
Critical	Critical Modification. The modifications have reached a critical level and the ecosystem processes have been modified completely with an almost complete loss of natural habitat and biota.	8.0 to 10	F

7.1.3.3 Ecological Importance and Sensitivity

The importance and sensitivity of water resources is determined in order establish resources that provide higher than average ecosystem services, biodiversity support functions or are particularly sensitive to impacts. The mean of the determinants as described by Rountree *et al.,* 2013, is used to assign the Ecological Importance and Sensitivity (EIS) category as listed in Table 7-3.

Table 7-3 Description of Ecological Importance and Sensitivity categories

EIS Category	Range of Mean	Recommended Ecological Management Class
Very High	3.1 to 4.0	A
High	2.1 to 3.0	B
Moderate	1.1 to 2.0	C
Low Marginal	< 1.0	D

7.1.3.4 Recommended Ecological Category and Recommended Management Objective

The Recommended Ecological Category (REC) and Recommended Management Objective (RMO) (Table 7-4) was determined based on the results obtained from the PES and EIS of the assessed wetlands, with the objective of recommending how a water resource should be managed. This is achieved by either maintaining or improving the ecological integrity of the wetland in order to ensure continued ecological functionality (DWA, 1999).

Table 7-4 Recommended Ecological Category and Recommended Management Objectives for water resources based on Present Ecological State and Ecological Importance and Sensitivity scores

		Ecological Importance and Sensitivity			
		Very High	*High*	*Moderate*	*Low*
PES	*A (Pristine)*	A Maintain	A Maintain	A Maintain	A Maintain
	B (Natural)	A Improve	A/B Improve	B Maintain	B Maintain
	C (Good)	A Improve	B/C Improve	C Maintain	C Maintain
	D (Fair)	C Improve	C/D Improve	D Maintain	D Maintain
	E/F (Poor)	D Improve	E/F Improve	E/F Maintain	E/F Maintain

7.1.4 Buffer Requirements

The "Preliminary Guideline for the Determination of Buffer Zones for Rivers, Wetlands and Estuaries" (Macfarlane *et al.,* 2014) was used to determine the appropriate buffer zone for the proposed activity.

7.1.5 Site Sensitivty Verification

The baseline aquatic / freshwater sensitivity of the project area was obtained using the National Web-based Environmental Screening Tool (Regulation 16(1)(v) of the Environmental Impact Assessment Regulations 2014, as amended). The allocated sensitivities for each of the relevant themes are either disputed or validated for the assessed areas based on the specialist assigned ecological characteristics (where applicable), with consideration been given to the presence of observed or likely sensitive fauna and flora.

7.2 Appendix B – Risk and Impact Assessment

7.2.1 Risk Assessment

The Department of Water and Sanitation (DWS) risk matrix assesses impacts in terms of consequence and likelihood. The significance of the impact is rated according to the classes presented in Table 7-5.

Table 7-5 Significance ratings matrix

Rating	Class	Management Description
1 – 29	(L) Low Risk	Acceptable as is or with proposed mitigation measures. Impact to watercourses and resource quality small and easily mitigated, or positive.
30 – 60	(M) Moderate Risk	Risk and impact on watercourses are notable and require mitigation measures on a higher level, which costs more and require specialist input. Licence required.
61 – 100	(H) High Risk	Watercourse(s) impacts by the activity are such that they impose a long-term threat on a large scale and lowering of the Reserve. Licence required.

7.2.2 Cumulative Impact Assessment

The following aspects as presented in Table 7-6 were considered in the environmental and cumulative impact assessment which refer to quantifying the significance of impacts in relation to the proposed development.

Table 7-6 Aspects and ratings considered in the cumulative impact assessment

Extent of impact	Description	Rating
Site specific	Very low (1)	1
Footprint & surrounding areas	Low (2)	2
Local area	Moderate (3)	3
Regional	High (4)	4
Entire habitat unit / Entire system	Very high (5)	5
Duration of impact	**Description**	**Rating**
The lifetime of the impact will be of a very short duration (0–1 years)	Very short term (1)	1
The lifetime of the impact will be of a short duration (2-5 years)	Short term (2)	2
Medium term (5–15 years)	Moderate term (3)	3
Long term (> 15 years)	Long term (4)	4
Permanent	Permanent (5)	5
Consequence/Magnitude of impact	**Description**	**Rating**
Small and will have no effect on the environment	None (0)	0
Minor and will not result in an impact on processes	MIinor (2)	2
Low and will cause a slight impact on processes	Low (4)	4
Moderate and will result in processes continuing but in a modified way	Moderate (6)	6
High (processes are altered to the extent that they temporarily cease	High (8)	8

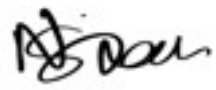
Very high and results in complete destruction of patterns and permanent cessation of processes	Very high (10)	10
Probability of impact	Description	Rating
Very improbable (probably will not happen)	Very improbable (1)	1
Improbable (some possibility, but low likelihood)	Improbable (2)	2
Probable (distinct possibility)	Probable (3)	3
Highly probable (most likely)	Highly probable (4)	4
Definite (impact will occur regardless of any prevention measures)	Definite (5)	5
Status	Description	Rating
Positive	Positive	Positive
Negative	Negative	Negative
Neutral	Neutral	Neutral
Reversibility	Description	Rating
None	None	None
Low	Low	Low
Moderate	Moderate	Moderate
High	High	High
Irreplaceable loss of resources?	Description	Rating
Yes	Yes	Yes
No	No	No
Can impacts be mitigated?	Description	Rating
Yes	Yes	Yes
No	No	No
Significance	Description	Rating
< 30 points	Low	Low
30-60 points	Medium	Medium
> 60 points	High	High

7.3 Appendix C – Specialist Declaration of Independence

Declaration

I, Namitha Singh, declare that:

- I act as the independent specialist in this application;
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, regulations and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, regulations and all other applicable legislation;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing any decision to be taken with respect to the application by the competent authority; and the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- All the particulars furnished by me in this form are true and correct; and
- I realise that a false declaration is an offence in terms of Regulation 13 (a) of NEMA and is punishable in terms of Section 49A of NEMA.



Namitha Singh

Ecologist

The Biodiversity Company

July 2024

Declaration

I, Andrew Husted, declare that:

- I act as the independent specialist in this application;
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, regulations and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, regulations and all other applicable legislation;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing any decision to be taken with respect to the application by the competent authority; and the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- All the particulars furnished by me in this form are true and correct; and
- I realise that a false declaration is an offence in terms of Regulation 71 and is punishable in terms of Section 24F of the Act.



Andrew Husted

Ecologist

The Biodiversity Company

July 2024

7.4 Appendix D – Specialist CVs

Namitha Singh

BSc. (Hons) Environmental Science (*Cum Laude*) (*Pr Sci Nat*)

Cell: +27 63 684 1752
Email: namitha@thebiodiversitycompany.com
Identity Number: 9509260335089
Date of birth: 26 September 1995



Profile Summary

Working experience in 7 provinces of South Africa.

Specialist experience within construction and development (residential/commercial/mixed-use/solar), wastewater infrastructure and agriculture.

Specialist expertise includes wetland resource management and rehabilitation, estuary and coastal management and, hydropedology.

Areas of Interest

Water Resource Management, Mining, Renewable Energy, Infrastructure Development, Agriculture, Land contamination, Sustainability and Conservation.

Key Experience

- Wetland Delineation and Functional Assessments
- Hydropedology Assessments
- Wetland Rehabilitation
- Coastal and Estuarine Assessments

Country Experience

South Africa

Nationality

South African

Languages

English – Proficient

Afrikaans – Basic

Qualifications

- BSc. Honours – Environmental Science (*Cum Laude*)
- BSc. Environmental Science and Life Science

Andrew Husted

M.Sc Aquatic Health (*Pr Sci Nat*)

Cell: +27 81 319 1225
Email: andrew@thebiodiversitycompany.com
Identity Number: 7904195054081
Date of birth: 19 April 1979



Profile Summary

Working experience throughout South Africa, West and Central Africa and also Armenia & Serbia.

Specialist experience in exploration, mining, engineering, hydropower, private sector and renewable energy.

Experience with project management for national and international multi-disciplinary projects.

Specialist guidance, support and facilitation for the compliance with legislative processes, for in-country requirements, and international lenders.

Specialist expertise include Instream Flow and Ecological Water Requirements, Freshwater Ecology, Terrestrial Ecology and also Ecosystem Services.

Areas of Interest

Sustainability and Conservation.

Instream Flow and Ecological Water Requirements.

Publication of scientific journals and articles.

Key Experience

- World Bank, Equator Principles and the International Finance Corporation requirements
- Environmental, Social and Health Impact Assessments (ESHIA)
- Environmental Management Programmes (EMP)
- Ecological Water Requirement determination experience
- Wetland delineations and ecological assessments
- Rehabilitation Plans and Monitoring
- Fish population structure assessments
- The use of macroinvertebrates to determine water quality.
- Aquatic Ecological Assessments
- Aquaculture

Country Experience

Angola, Botswana, Cameroon

Democratic Republic of Congo

Ghana, Ivory Coast, Lesotho

Liberia, Mali, Mauritius, Mozambique

Nigeria, Republic of Armenia,

Senegal, Serbia, Sierra Leone, South Africa

Tanzania

Nationality

South African

Languages

English – Proficient

Afrikaans – Conversational

German - Basic

Qualifications

- MSc (University of Johannesburg) – Aquatic Health.
- BSc Honours (Rand Afrikaans University) – Aquatic Health
- BSc Natural Science
- Pr Sci Nat (400213/11)
- Certificate of Competence: Mondi Wetland Assessments
- Certificate of Competence: Wetland WET-Management
- SASS 5 (Expired) – Department of Water Affairs and Forestry for the River Health Programme
- EcoStatus application for rivers and streams

Signed:

Andrew Husted

CURRICULUM VITAE: Andrew Husted

Appendix F
Water Management Plan

iLanda
WATER SERVICES

+27 83 408 3241
bruce@ilandawater.co.za
www.ilandawater.co.za
P.O. Box 44961, Linden, 2104

WITHOK TSF

WATER MANAGEMENT PLAN

Report prepared for

GEO TAIL

Report prepared by

Bruce Randell

PhD (Eng), Pr Eng

May 2024 | Report no. 0442-Rep-001-Rev 0

CONTENTS

1. INTRODUCTION 1

1.1 Battery Limits 1
1.2 Regional Setting 2

2. CLIMATE DATA 4

2.1 Sources of Rainfall and Evaporation Data 4
2.1.1 Rainfall gauge selection 5
2.2 Sources Evaporation Data 6
2.3 Peak rainfall data 6
2.3.1 Probable maximum precipitation (PMP) 8
2.3.2 GISTM requirements 9
2.4 Stochastic Rainfall 9

3. INFRASTRUCTURE LAYOUT AND OPERATIONS 12

3.1 Description of Operations 12

4. STORM WATER MANAGEMENT 14

4.1 Storm Water Management Principles 14
4.2 External Catchment Storm Water Management 14
4.2.1 Attenuation dam 14
4.2.2 Clean storm water diversion channel sizing 15
4.2.3 Storm water management between the clean storm water diversion and the catchment paddocks 18
4.2.4 Southern external catchment storm water management 20
4.3 Brakpan Side Slope Storm Water Management 22
4.4 Side Slope Storm Water Management and Catchment Paddocks 23
4.4.1 Concurrent rehabilitation 23
4.4.2 Side slope storm water management 23
4.4.3 Catchment paddocks 24
4.4.4 Chutes 26
4.4.5 Chute entrances 28
4.4.6 Bench profiling and storm water management 29
4.4.7 Ramp storm water management 31
4.4.8 Chutes crossing access roads (LDV crossings) 34
4.4.9 Chutes crossing access roads (ADT crossings) 35

5. FREEBOARD ANALYSIS 36

5.1 Legal and Best Practice Requirements 36

5.2 Freeboard Targets 39
5.3 Freeboard Analysis Results 39
5.3.1 Commentary on freeboard results (current situation) 41

6. WATER BALANCE 42

6.1 Modelling 42
6.1.1 Probabilistic modelling (dynamic footprints) 42
6.1.2 Time series modelling (static footprints and deposition rates) 42
6.2 Slurry Water 43
6.3 Drain flow management 44
6.3.1 Drain flow simulations 44
6.3.2 Collector pipe sizing 45
6.4 Pool Management and Decant Results 46
6.4.1 Barge decant 46
6.4.2 Pool management 47
6.5 Return Water Dam 48
6.6 Operational Water balance and returns 49

7. CLOSURE 50

7.1 Closure Concept 50
7.2 Modelling 50
7.2.1 Modelling results 50

8. CONCLUSIONS 51

9. REFERENCES 52

FIGURES

Figure 1: Battery limits 2

Figure 2: Regional setting 3

Figure 3: Climate data summary for the TSF complex 4

Figure 4: Nearest rainfall station locations 5

Figure 5: Log Pearson Type 3 statistical fit to the annual maximum series 7

Figure 6: Monthly average rainfall calibration 10

Figure 7: Monthly average rainfall days calibration 10

Figure 8: Consecutive rainfall days calibration....10
Figure 9: Days between rainfall days calibration....11
Figure 10: 300 stochastic rainfall sequences....11
Figure 11: Layout and infrastructure relating to the water balance....12
Figure 12: Attenuation dam catchment....16
Figure 13: Attenuation dam outlet structure....16
Figure 14: Attenuation dam hydrographs....17
Figure 15: Attenuation dam....17
Figure 16: Clean storm water diversion....18
Figure 17: Storm water management between the clean storm water diversion and the catchment paddocks....19
Figure 18: Storm water management between the clean storm water diversion and the catchment paddocks....19
Figure 19: Southern external catchment storm water management....20
Figure 20: Probability distribution of Impoundment 2 water depth....21
Figure 21: Brakpan side slope storm water management above the Withok TSF....22
Figure 22: Clean storm water management concept principles....24
Figure 23: side slope storm water management....25
Figure 24: Left side chute....27
Figure 25: Right side chute....27
Figure 26: Slopes where chutes are required....28
Figure 27: Chute entrance infrastructure....28
Figure 28: Recommended bench longitudinal profile....29
Figure 29: Required bench cross profile....30
Figure 30: Required bench cross profile in the vicinity of a chute....30
Figure 31: Ramp storm water management at bench intersection....31
Figure 32: Ramp storm water management....32

Figure 33: Typical ramp and bench profile....32
Figure 34: Ramp profiling in the vicinity of a chute....33
Figure 35: Concrete drift for LDV traffic....34
Figure 36: Concrete drift for ADT traffic....35
Figure 37: Freeboard terminology referred to in this report....39
Figure 38: Likely pool locations as a result of extreme rainfall events (End of life)....41
Figure 39: Slurry water breakdown....43
Figure 40: Simulated drain flow....44
Figure 41: Collector pipe system....45
Figure 42: Simulated barge pumping....46
Figure 43: Simulated Pool storage....47
Figure 44: Simulated return water dam storage....48
Figure 45: Simulated return to process from the return water dam....49
Figure 46: Average monthly and annual returns....49
Figure 47: Simulated drain flows post closure....51

APPENDICES

Appendix A: Water Balance Diagrams

REVISION TRACKING

Rev 0: Original document

Disclaimer

This report is protected by copyright vested in iLanda Water Services CC (iLanda). It may not be reproduced or transmitted in any form or by any means whatsoever to any person without the written permission of the copyright holder, iLanda.

The opinions expressed in this report have been based on the information supplied to by the Client. The opinions in this report are provided in response to a specific request from the Client to do so. iLanda has exercised all due care in reviewing the supplied information. Whilst iLanda has compared key supplied data with expected values, the accuracy of the results and conclusions from the review are entirely reliant on the accuracy and completeness of the supplied data. iLanda does not accept responsibility for any errors or omissions in the supplied information and does not accept any consequential liability arising from commercial decisions or actions resulting from them. Opinions presented in this report apply to the site conditions and features, as they existed at the time of iLanda's investigations, and those reasonably foreseeable. These opinions do not necessarily apply to conditions and features that may arise after the date of this report, about which iLanda had no prior knowledge nor had the opportunity to evaluate.

1. INTRODUCTION

Geo Tail SA (Pty) Ltd commissioned iLanda Water Services CC to provide a water management plan for the Withok tailings storage facility complex (TSF complex). The TSF complex consists of a single lined tailings storage facility that abuts against the southern flank of the Brakpan TSF. The TSF will be served by a new dedicated return water dam. Decant water is not pumped to the return water dam but rather returned to process. Dirty storm water runoff from the side slopes and drain flow returns are routed to the return water dam before being returned to process. The study objectives are as follows:

- Provide an operational storm water management plan for the Withok TSF.
- Provide an operational storm water management plan to accommodate external catchment storm water.
- Calculate the water balance and determine the average return.
- Determine the likely pool control risks associated with various barge decant rates.
- Size the decant system.
- Size return water dam infrastructure and return pumping infrastructure.
- Size clean water diversions.
- Determine a hydrologically sustainable closure concept.
- Determine these using probabilistic analysis.

1.1 Battery Limits

The battery limits are complex and are shown in Figure 1. Where these facilities interface with other facilities the following battery limits apply:

- Upstream: The cyclone overflow and underflow streams.
- Downstream: The water that is abstracted from the return water dam, to be returned to the process.
- Water return from any scavenger borehole system or is excluded.

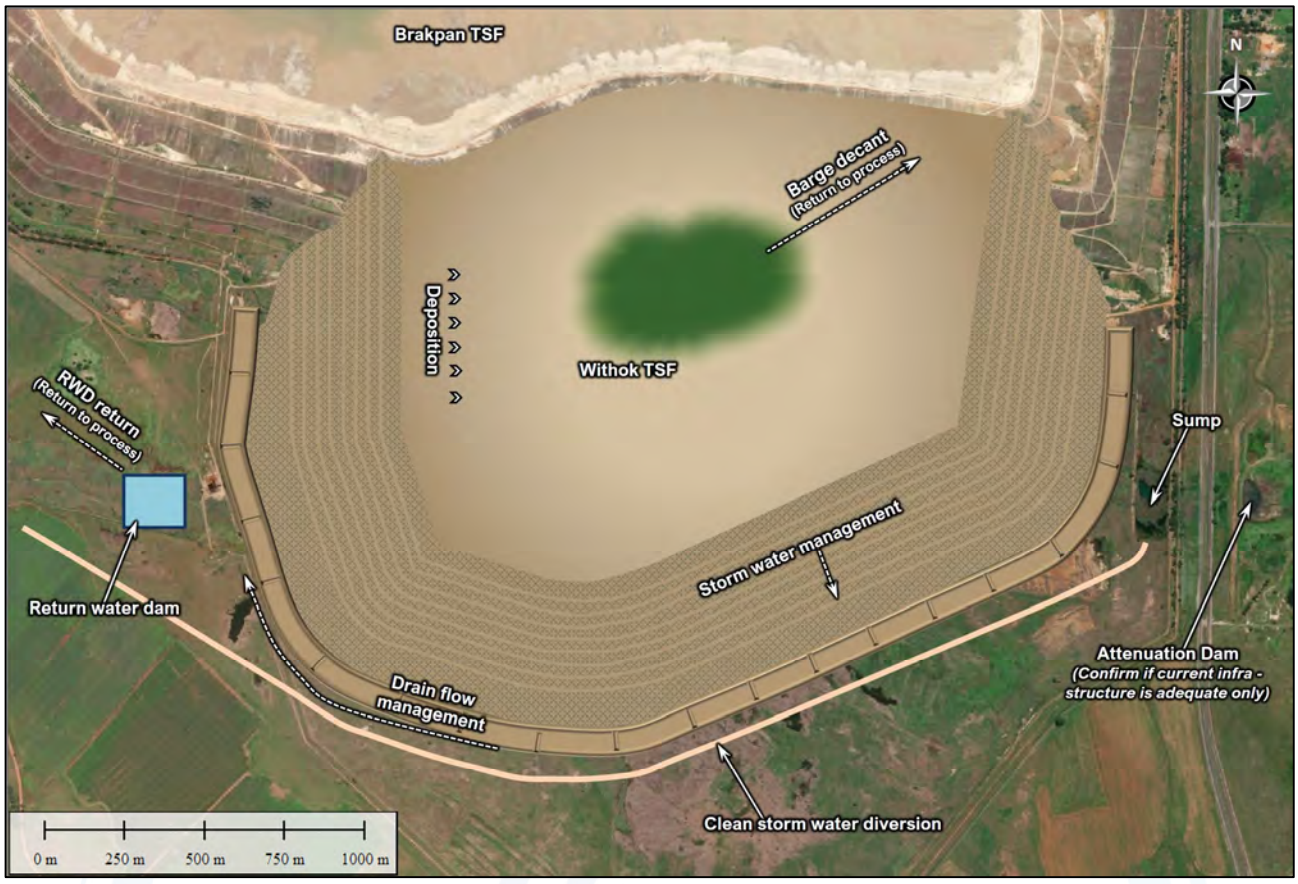


FIGURE 1: BATTERY LIMITS

1.2 Regional Setting

The Withok TSF complex is located approximately 14 km south west of Springs, in quaternary catchment C22C, as shown in Figure 2. The Rietspruit flows east to west past the northern flank of the Brakpan TSF. The Rietspruit is a tributary of the Kliprivier, which flows into the Vaal River, upstream of the Vaal Barrage but downstream of the Vaal Dam.

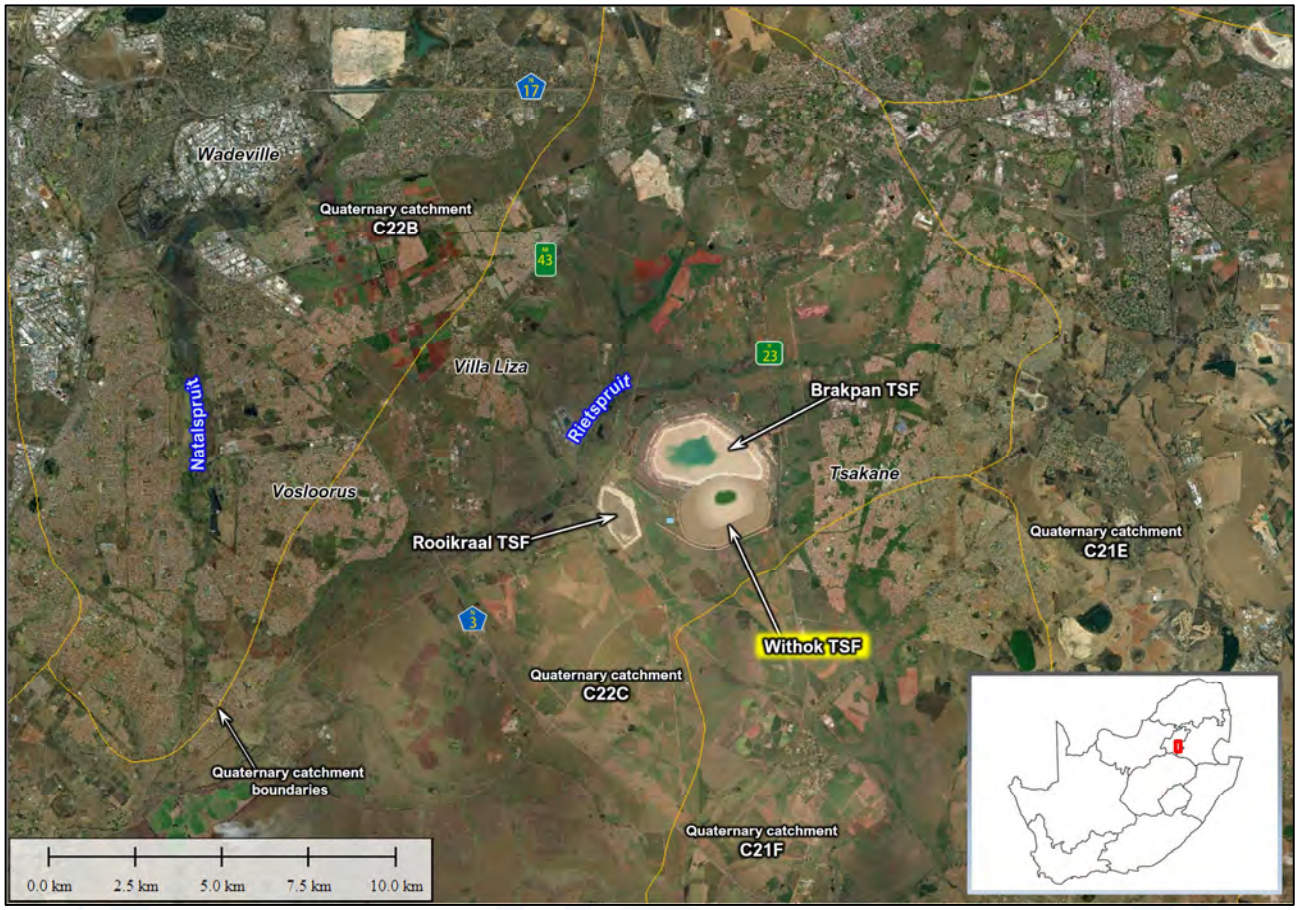


FIGURE 2: REGIONAL SETTING

2. CLIMATE DATA

The climate data used is summarised as follows:

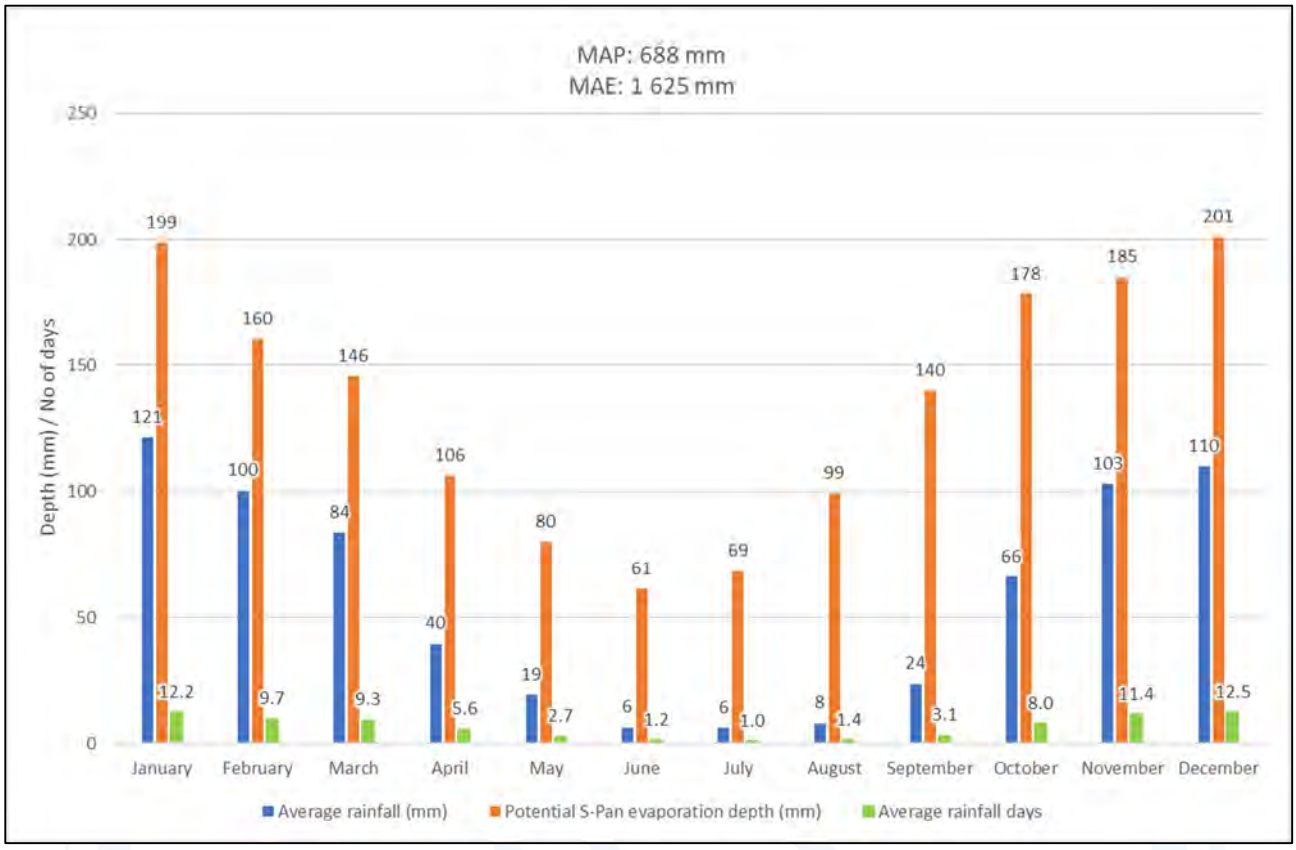


FIGURE 3: CLIMATE DATA SUMMARY FOR THE TSF COMPLEX

2.1 Sources of Rainfall and Evaporation Data

Daily rainfall data for the area was obtained from the CCWR (Computing Centre for Water Research, University of Kwazulu Natal) database. Gauge number 0476736 (Springs (RWB)) was used. The gauge is located 12 km north west of the TSF complex. The data spans the period 1903 to 2000. South African Weather Services' (SAWS) daily rainfall was also purchased for gauge 0476766 Springs Olympia Park and used to extend the rainfall record. This is the closest active/recently active SAWS rainfall station, located approximately 16 km north west of the TSF complex. The gauge locations are shown in Figure 4.

The Springs Olympia Park gauge has a data gap in December 2003 which was patched with data from the CCWR gauge. December 1991 was used to infill the data. December 1991 is the closest December to the December average and contained no extreme rainfall events (else this would skew the peak rainfall statistics). Data beyond January 2009 was too patchy and not used. The gauge was closed in September 2009.

The combined record spans September 1903 to December 2008.

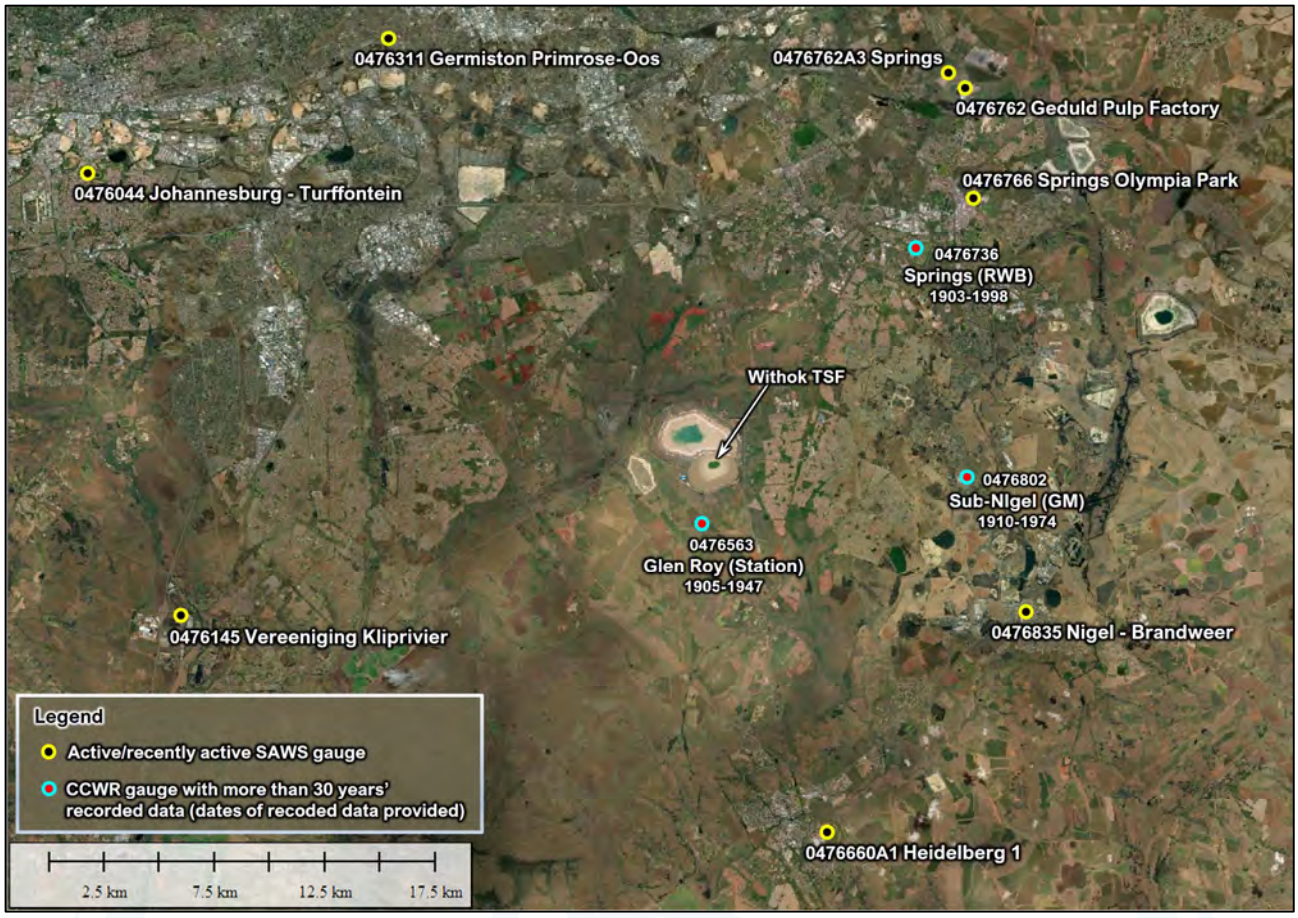


FIGURE 4: NEAREST RAINFALL STATION LOCATIONS

2.1.1 Rainfall gauge selection

There are no currently operational/recently operational South African Weather Services (SAWS) rainfall stations in close proximity to the TSF site. The closest SAWS rainfall stations are shown in Figure 4. There are however CCWR gauges that are closer than any of the SAWS gauges. The CCWR gauges are a combination of recorded and patched data spanning approximately the 20th century. Three of these gauges have more than 30 years' recorded data (with the remaining data being patched data). These are shown in Figure 4.

The Glen Roy gauge is very close to site but only contains recorded data from 1905 to 1947. The rest of the record is patched by the CCWR. The Springs and Sub-Nigel gauges have far longer recorded records and are still acceptably close to the site with similar elevations. There are no significant topographical features in the area so both these gauges will provide representative data. The Springs and Sub-Nigel gauges are a similar distance from the complex, but the Springs gauge has a longer, and more recent recorded record than the Sub-Nigel gauge. It is also close to a recently active SAWS gauge. This CCWR gauge (0476736 Springs (RWB)) was therefore selected as the rainfall gauge and is paired with the SAWS gauge 0476766 Springs Olympia Park to provide additional data.

2.2 Sources Evaporation Data

Evaporation data and its monthly distribution were sourced from the Water Resources of South Africa Studies' data sets, zone 11A (Midgley et al., 1990) and (Middleton et al, 2005), using quaternary catchment C22C.

2.3 Peak rainfall data

The peak 24-hr rainfall depths are presented in Table 1.

The daily rainfall record, discussed in section 2.1, was analysed and the annual maximum series was extracted from the data. This annual maximum series was statistically analysed to determine various T-year recurrence interval 24-hour storm depths. A Log Pearson Type 3 distribution was selected as the most appropriate statistical fit. This fit is shown in Figure 5. The rainfall record is long, consists of good data, is representative of the TSF complex, and is suitable to be used to calculate peak rainfall.

TABLE 1: PEAK 24-HR RAINFALL DEPTHS FOR THE TSF COMPLEX

Recurrence interval (year)	24-hour rainfall depth (mm)
2	52
10	85
20	99
50	119
100	136
200	153
1 000	199
10 000	281
PMP	405 (high), 244 (low)*

* *Refer to the discussion in Section 2.3.1 for context.*

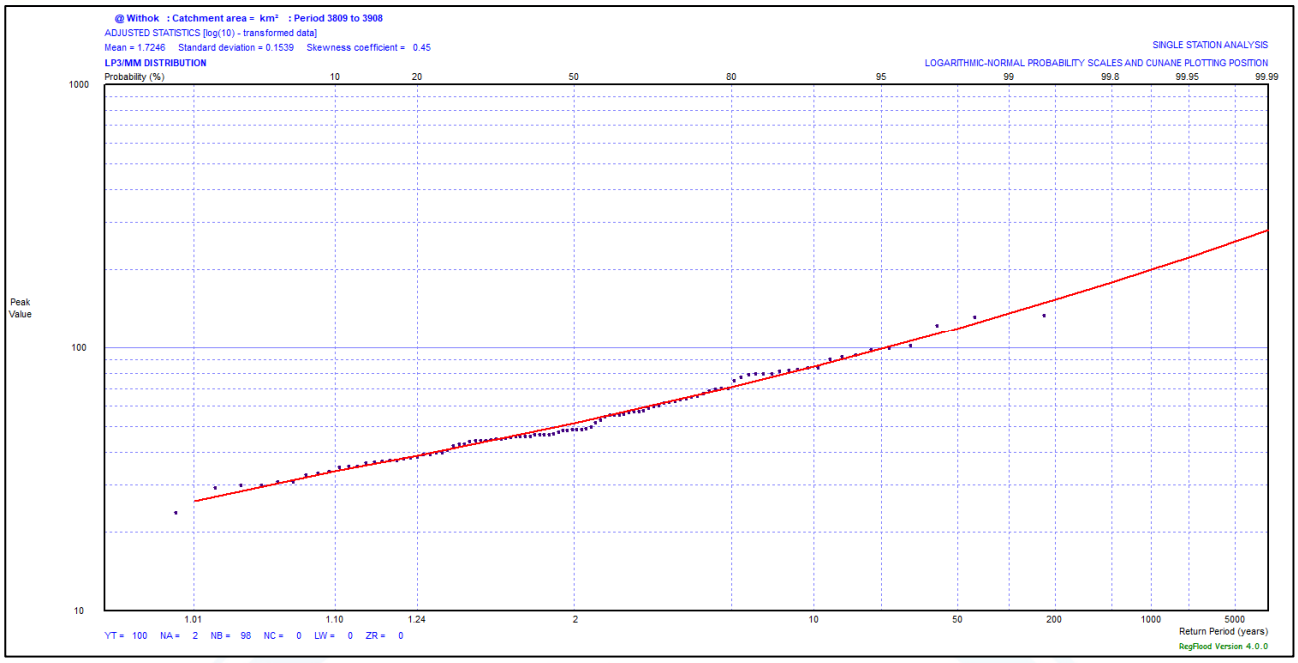


FIGURE 5: LOG PEARSON TYPE 3 STATISTICAL FIT TO THE ANNUAL MAXIMUM SERIES

2.3.1 Probable maximum precipitation (PMP)

The PMP is not known, and insufficient data is available to calculate the PMP reliably. One would typically require in the order of 1 000 years of daily rainfall data to calculate the PMP with statistical reliability. No record of this length exists on earth, and the approximately 100-year record at the site is an order of magnitude short of providing sufficient data for statistical reliability. In addition to this, our understanding of storm mechanics is also insufficient.

Many different methods have been used in the past to calculate the PMP. These methods result in a large range of possible PMP values. Some of these methods have been proven incorrect. Recorded data has exceeded what was once thought to be upper bound rainfall depths. One such example is the HRU 1/72 depths, as cited in Johnson and Smithers (2020).

The PMP is often regarded as being equal to the 10 000-year recurrence interval storm depth. The 10 000-yr 24-hr storm depth extrapolated from the Log Pearson Type 3 distribution fit (described in Section 2.3) is 281 mm.

In 2020, Johnson and Smithers published an update to the estimation of the 1-day PMP. This publication calculated 244 mm for the 24-hr rainfall depth for the area around the Withok TSF, thus concurring reasonably well with the Log Pearson Type 3 distribution's 10 000-yr depth.

Hershfield's method, using a K value of 15, yields a 24-hr PMP depth of 381 mm. It must be noted that many researchers, and Herchfield himself, questioned the universal use of K=15. K values have been found to decrease with the increasing mean of the annual maximum series, and K values mostly fall between 2 and 10. Using a K value of 10, the 24-hr PMP is calculated to be 273 mm. This is similar to that calculated by Johnson and Smithers (2020) and the 10 000-yr depth.

The HRU 1/72 method results in a PMP of 405 mm. This is the most conservative of all depths calculated. As stated earlier, this method has been shown to underestimate the PMP in some areas. Being the most conservative depth calculated, it would be disingenuous to say that the Withok PMP is also underestimated. These underestimations are likely to occur in some areas of South Africa. Being incorrect in some areas means the formulae used are not correct, and it is not inconceivable that it overestimates PMP depths in other areas.

Dyson (2009) analysed 24-hr rainfall records in the Gauteng region. The paper states that 300 mm and 280 mm of rainfall has been measured in southern Gauteng (Viljoensdrift) and northern Gauteng (Rietondale) in 24 hours. This raises the following point: if 300 mm has been recorded in one part of Gauteng, it is not impossible that 300 mm can be recorded at another part of Gauteng since the weather system that generated this rainfall was a large regional system (deep surface trough). By this logic, 300 mm could also occur at Withok as there are no significant topographical features at either Viljoensdrift or Withok. There is no reason why Withok could not see the same rainfall on another unlucky day.

The above lengthy discussion shows that we could continue adding PMP calculation methods. All this would do is add more varied data points, all of which are incorrect. It is therefore concluded that a high and low PMP value be adopted. The high PMP is that calculated using the HRU 1/72, i.e. 405 mm. The low value calculated is that calculated by Johnson and Smithers (2020), i.e. 244 mm.

Long duration PMPs are not considered. The 7-day PMP is used in water resources and was used to calculate probable maximum floods in the Vaal catchment after experience in the high flood events in this catchment in the mid-1970s. The Vaal River catchment is many orders of magnitude larger than the basin of the Withok TSF, so this is not applicable. Decant volumes during these long-event PMPs will exceed rainfall inputs. The World Meteorological Organisation (2009) does not even consider 7-day PMP events for small catchments and considers events up to a 72-hr event. In mid latitude locations, the difference between the 24 and 72-hour PMP events is small compared to the 24-hr event for small catchments. Given the low confidence in the PMP, extending the PMP duration is just another statistically incorrect method to introduce additional conservatism. The adoption of the high-value PMP already does this.

2.3.2 GISTM requirements

GISTM requires the use of the 10 000-yr event. The duration of the event is not specified. GISTM further states that the PMP may also be used, provided that the storm depth meets or exceeds the 10 000-yr depth. Given the low confidence in the calculation of the PMP and the fact the GISTM only considers the PMP as optional, it is not required for GISTM related calculations. However, the PMP will be used occasionally in this report for interest, where applicable.

2.4 Stochastic Rainfall

A stochastic rainfall generator was calibrated on the daily rainfall record discussed in section 2.1. The monthly average rainfall and rainfall days calibration is shown in Figure 6 and Figure 7 respectively. The frequency of consecutive rainfall days and days between rainfall days calibration is shown in Figure 9 and Figure 10. The mean annual precipitation of the stochastic rainfall record is 687.9 mm. This is similar to the mean annual rainfall of the recorded data of 687.8 mm.

The water balance modelling used 300 sequences of stochastically generated rainfall. This rainfall is shown in Figure 10. Two extreme storms of the order of the HRU/72 PMP are also included in the stochastically generated rainfall. These will be used to show the effects of storms of this magnitude on the water balance.

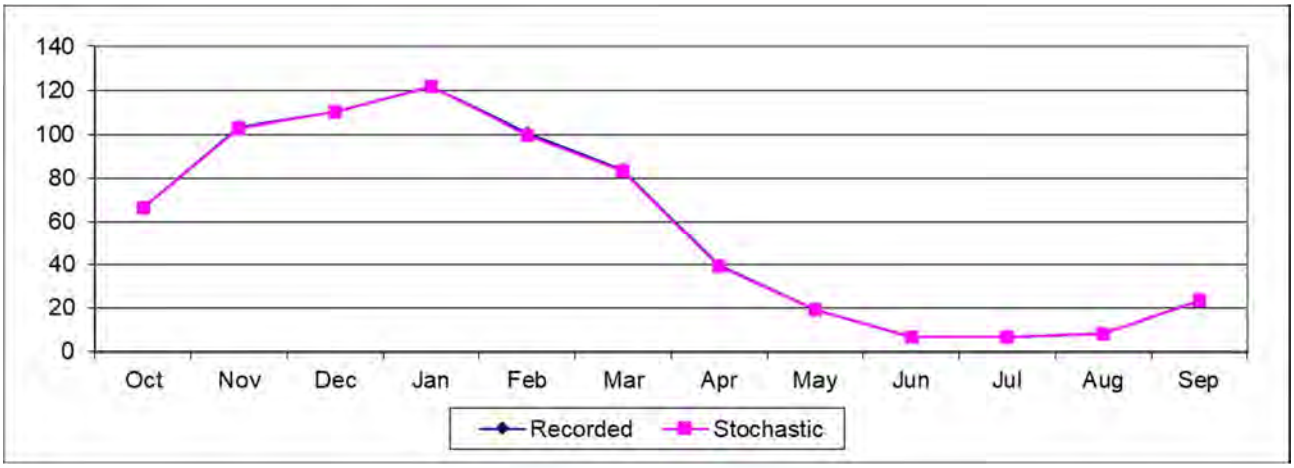


FIGURE 6: MONTHLY AVERAGE RAINFALL CALIBRATION

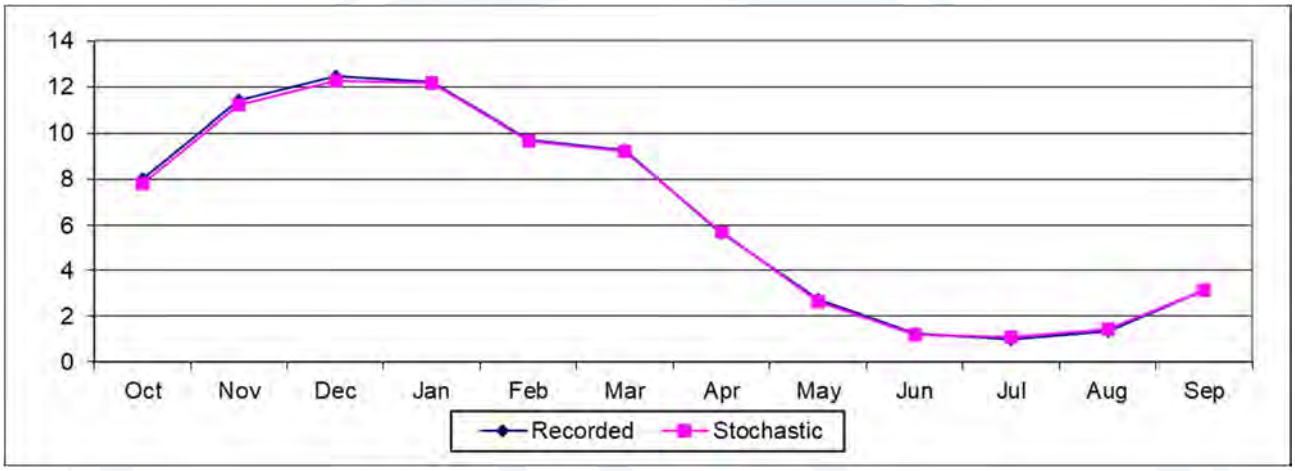


FIGURE 7: MONTHLY AVERAGE RAINFALL DAYS CALIBRATION

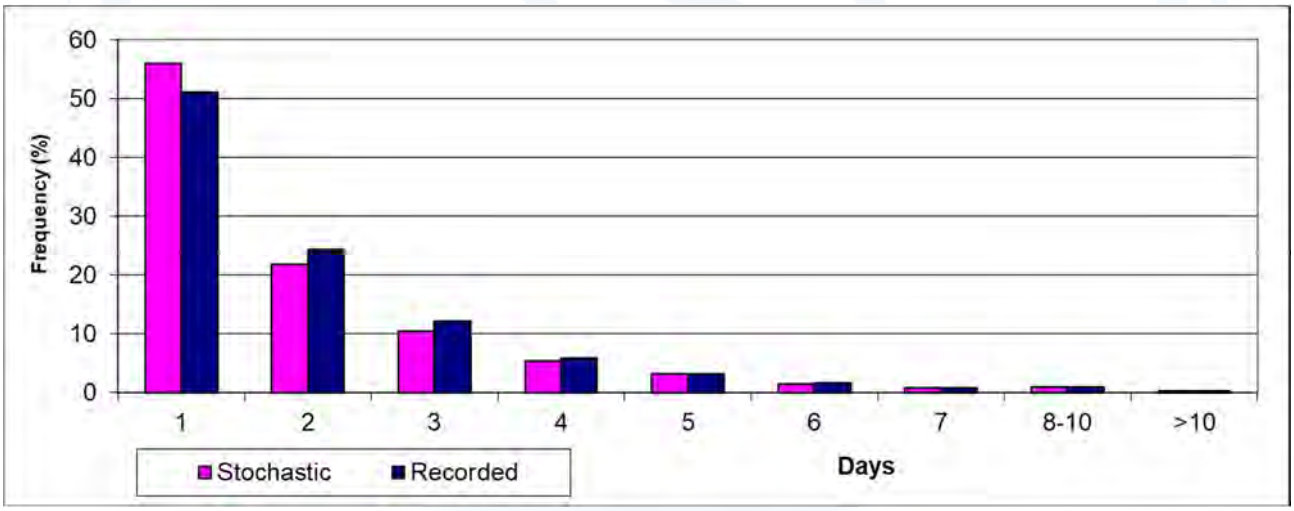


FIGURE 8: CONSECUTIVE RAINFALL DAYS CALIBRATION

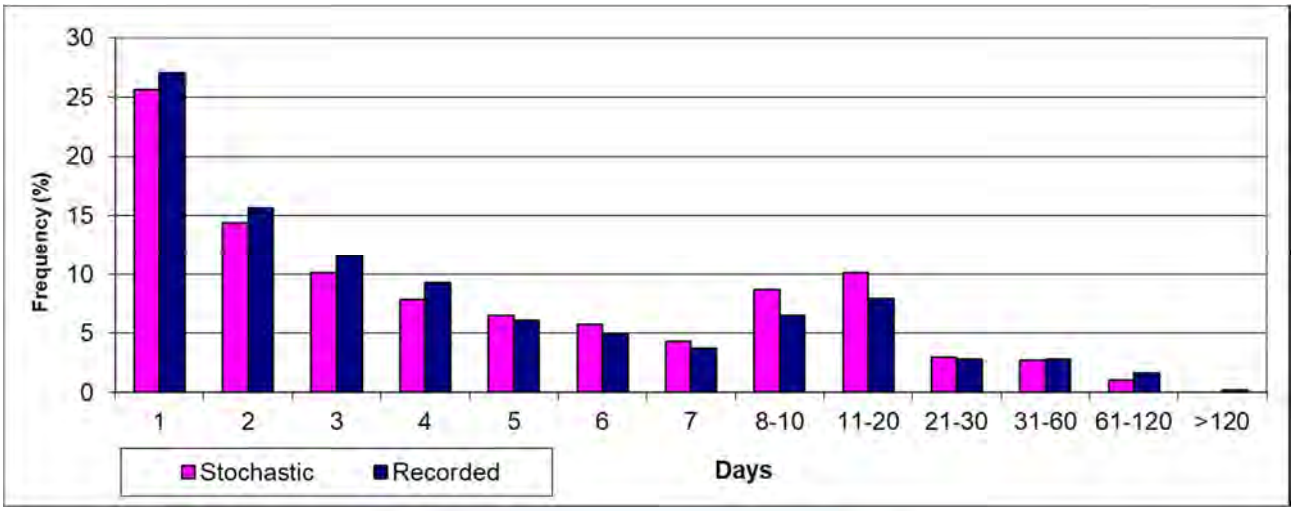


FIGURE 9: DAYS BETWEEN RAINFALL DAYS CALIBRATION

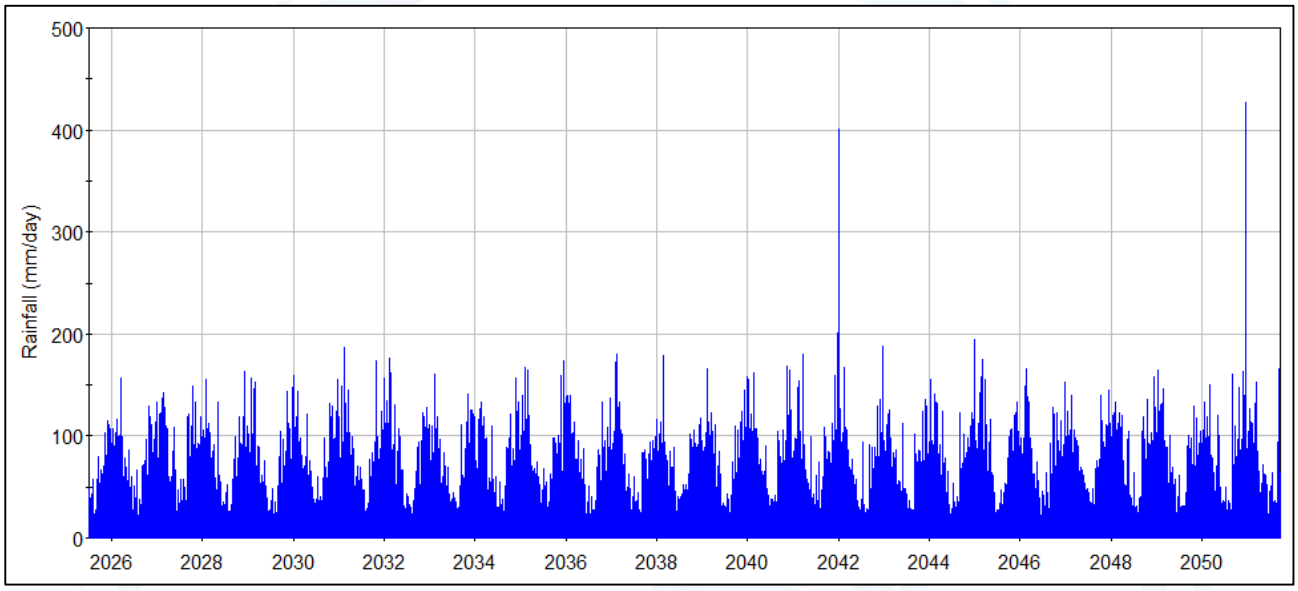


FIGURE 10: 300 STOCHASTIC RAINFALL SEQUENCES

3. INFRASTRUCTURE LAYOUT AND OPERATIONS

The layout and infrastructure relating to water management is shown in Figure 11.

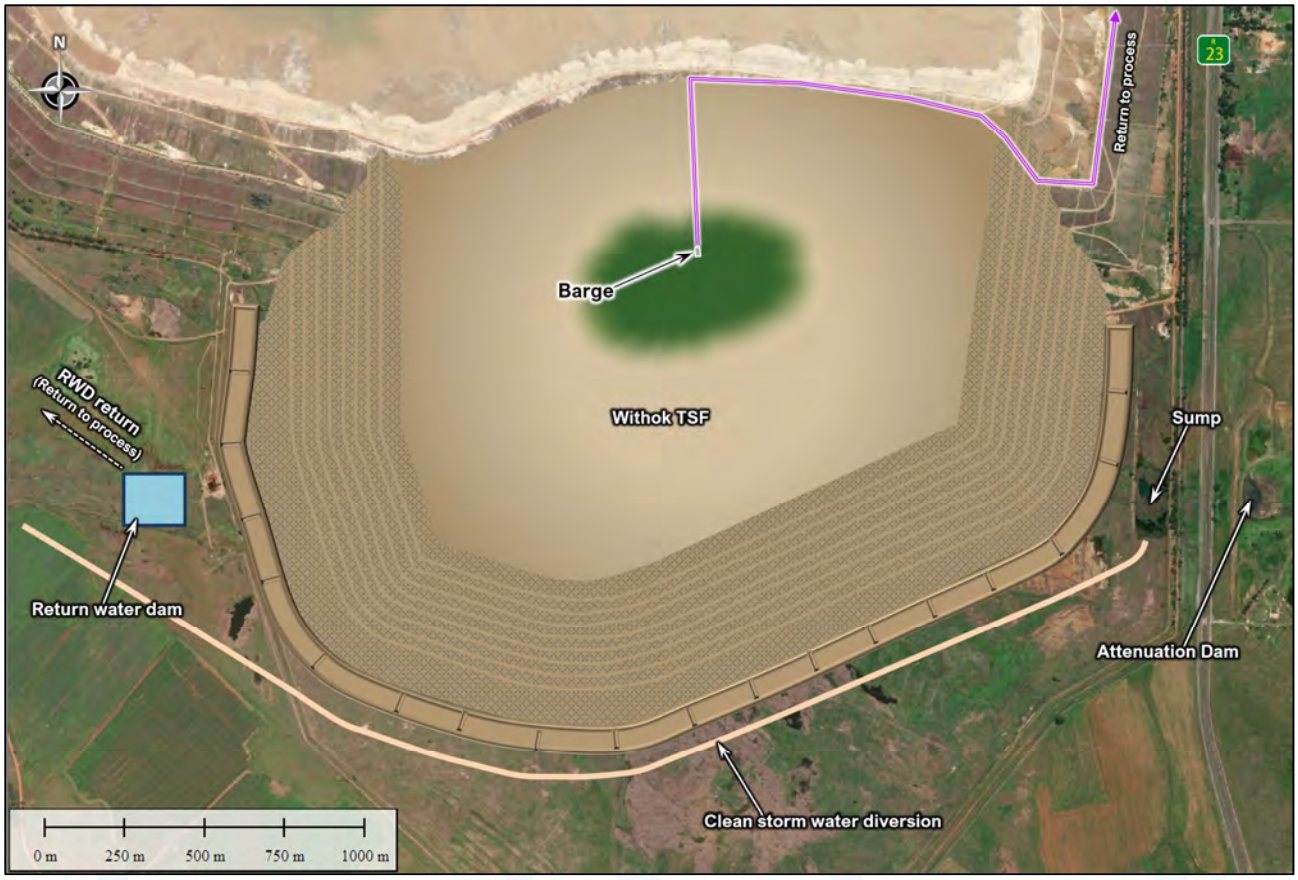


FIGURE 11: LAYOUT AND INFRASTRUCTURE RELATING TO THE WATER BALANCE

3.1 Description of Operations

The Withok TSF is a single compartment lined TSF. It is constructed on the original Withok TSF footprint. The original Withok TSF was remined, leaving the current footprint. The Withok TSF abuts against the southern flank of the existing Brakpan TSF.

The Withok complex will have a dual compartment return water dam. Decant water is returned to process, and not pumped to the return water dam. Most dirty side slope storm water and all drain water is routed to the return water dam (the remaining dirty side slope storm water is evaporated in the catchment paddocks). Because decant water is not pumped to the return water dam, a silt trap at the return water dam is not required. The return water dam will be HDPE lined. Water is returned to the process from the return water.

The TSF footprint is located in a drainage line that flows east to west. Storm water from this catchment flows into an existing attenuation dam, located east of the R23 national road. This dam was constructed to

attenuate storm flows so that these flows could be piped under the original Withok TSF. Water is conveyed under the R23 through culverts, from where it flows into a sump, which used to drain into the pipeline under the original Withok TSF. The current design does not employ a piped solution, rather allowing the sump to overflow into an open trench that flows east to west, to the south of the Withok TSF.

The tailings will be pumped to the tailings storage facility as a slurry where it is cycloned into a coarse fraction (cyclone underflow) and a fine fraction (cyclone overflow). The outer embankments, that are constructed from cyclone underflow, contain the overflow. The cyclone underflow will be deposited as a wet material, but no supernatant water is expected to be released to the pool. All free water will percolate down through the underflow where it is either evaporated or intercepted by the underdrain system.

The cyclone overflow will form a basin within the outer embankment. The basin beach is formed by depositing the cyclone overflow with open end pipes from each cyclone. The solids segregate out to form a beach while supernatant water is released and flows into a pool located at the centre of the basin. The pool will be central.

Storm water generated on the beach will also collect in the pool. The pool therefore contains a mixture of storm water and supernatant water. The pool is decanted using a floating barge that pumps water from the pool back to the process.

Storm water from the side slopes is collected as part of the dirty water system. Once a section of side slope between benches is complete, rehabilitation of that section starts. To be conservative, storm water from the rehabilitated side slopes is also managed as part of the dirty water system. Side slope storm water is collected at the base of the tailings storage facility in the catchment paddocks for temporary storage. Most of this water is piped to the return water dam via a collector pipe system. The remainder is evaporated.

Drain flows are collected and routed to the same collector pipe system that conveys the dirty storm water to the return water dam. This return water dam must be operated as empty as possible to allow capacity to accommodate storm water.

The deposition rate will be approximately 1.3 Mtpm. The design life of the Withok TSF is approximately 24.5 years.

4. STORM WATER MANAGEMENT

4.1 Storm Water Management Principles

The storm water management principles are summarised as follows:

1. Dirty storm water is routed to the catchment paddocks either directly from the slope above them, or via chutes from higher up slopes.
2. Dirty storm water collected in the catchment paddocks is either evaporated or routed to the return water dam and recycled back to the process.
3. All storm water from cladded and rehabilitated areas are conveyed to the catchment paddocks using chutes. This water is managed as part of the dirty water system.
4. Storm water conveyance infrastructure is sized for the tailings storage facility at final height (1 660 mamsl). The design is modular allowing for simple capacity increases if they are required in the future.

4.2 External Catchment Storm Water Management

4.2.1 Attenuation dam

The Withok TSF footprint is located in a drainage line that flows east to west. This is shown in Figure 12. The catchment area upstream of the R23 national road measures 1050.5 ha. The catchment is mostly urban with the township of Takane dominating the land use in the catchment. Storm water from this catchment flows into an existing attenuation dam, located east of the R23 national road. This dam was constructed to attenuate storm flows so that these flows could be piped under the original Withok TSF. The attenuation dam catchment is enlarged due to a series of channels that were excavated to route water into the attenuation dam.

The attenuation dam's capacity was measured using the latest available survey – 621 000 m^3. The dam has an estimated dead storage of 1 700 m^3. Further details are shown in Figure 15.

The dam is continuously emptied by two 450 mm diameter steel pipes constructed into an outlet structure. This is shown in Figure 13. One of the two 450 mm steel outflow pipes is partially blocked by a large piece of concrete and other debris. The outlet pipe was fully submerged. The 2nd pipe inlet is completely open and was flowing ⅔ full at the time of the inspection. The outlet end of the pipes was not inspected. There are no grates that cover the inlet structure. ***This is considered a significant risk to the Withok TSF and must be rectified***. The inlet structure may have had grates at the time of construction, but these may have been stolen.

The dam is downstream of Takane and the water is full of debris from this township. Some of this debris could block the outlet pipes and render the dam inoperable. Aerial photography shows that the dam was inoperable from at least January 2015 to May 2016, where it was full. Highlands Hydrology (2016) reported

that the outlet structure had been vandalised, although the nature of this vandalism was not reported. The outlet structure is easily accessible by foot and vehicle. An inoperable dam will have negligible attenuation function and the full catchment flood peaks will flow into the Clean storm water diversion. The 50-yr and 100-yr flood peak of 80 m^3/s and 110 m^3/s require a Clean storm water diversion channel depth of 2.5 m and 2.9 m respectively. This exceeds the minimum design channel depth of 2 m.

A grating structure, or similar, must be constructed over the inlet to prevent large debris reaching the outlet pipes. This grating structure should be made from concrete rather than steel, else it will be stolen.

4.2.2 Clean storm water diversion channel sizing

Clean storm water diversion flood peak

The 50-yr storm volume (shown in Figure 12) is slightly less than the capacity of the attenuation dam. The dam therefore will not overtop, and dam outflows will be limited to the flow in the pipes. Hydraulic analysis shows that this flow will peak at 1.7 m^3/s.

The 100-year storm volume is larger than the dam capacity. Hydraulic analysis shows that the dam will overtop in the event of a 100-yr design storm. The outflow (pipe outflow plus overflow) peaks at 38.3 m^3/s. However, by assuming that only one outlet pipe is functioning, this outflow peaks at 39.3 m^3/s. This is the design flow that was used for the Clean storm water diversion design. This is not an overly conservative assumption:

- In 2015/16, both the outlet pipes were not functioning.
- One outlet pipe is largely blocked at the time of writing.

The attenuation dam hydrographs are shown in Figure 14. These flow rates will result in the R23 flooding. No attenuation downstream of the attenuation dam is considered. This attenuation capacity will already be full by the time the attenuation dam overflows.

A secondary external catchment exists between the attenuation dam catchment and the Clean storm water diversion. This catchment measures 325 ha. The secondary external catchment (shown in yellow in Figure 12) has a significantly shorter time to concentration than the larger attenuation dam catchment (shown in red). The attenuation dam catchment's time to concentration is further increased by the attenuation effects of the dam, which spills approximately 80 minutes after the inflow flood peak. The smaller flood peak from this secondary external catchment passes through the Clean storm water diversion more than 1 hour before the much larger flood peak (39.3 m^3/s) from the attenuation dam catchment passes through the Clean storm water diversion. The Clean storm water diversion is therefore sized for the much larger flood peaks discussed above.

Clean storm water diversion channel sizing

The Clean storm water diversion channel sizing is shown in Figure 12. GN 704 requires this diversion to be sized for the 50-yr design storm. However, it was considered prudent to oversize this channel and design it

to convey the 100-yr storm. This also allows for some flexibility in the case that the attenuation dam outlet structure is compromised. The diversion channel will be an unlined channel, apart from the downstream 330m which must be armoured to protect against scouring. Some sections of this channel are in cut and others are in fill. The channel dimensions and hydraulics are shown in Figure 16.

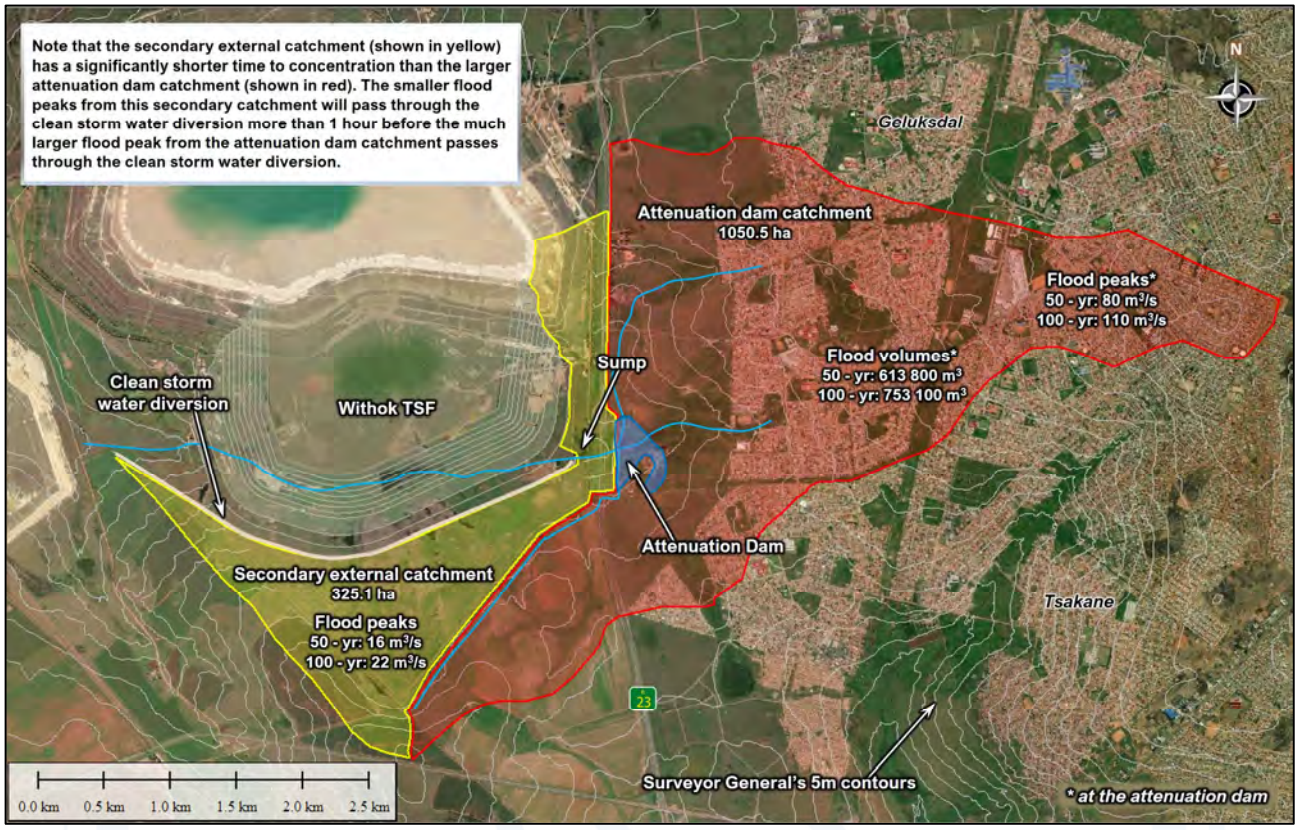


FIGURE 12: ATTENUATION DAM CATCHMENT



FIGURE 13: ATTENUATION DAM OUTLET STRUCTURE



FIGURE 14: ATTENUATION DAM HYDROGRAPHS

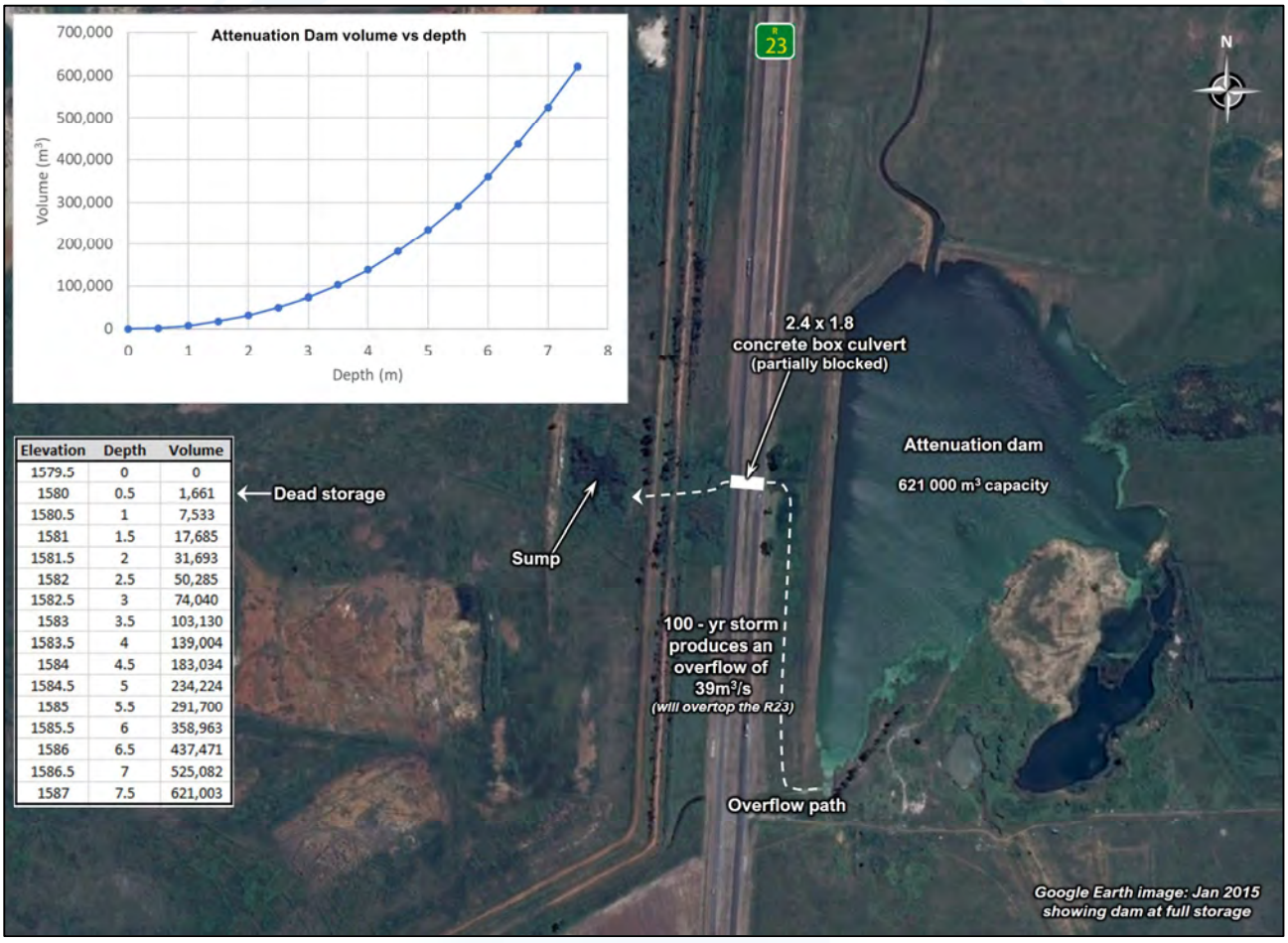


FIGURE 15: ATTENUATION DAM

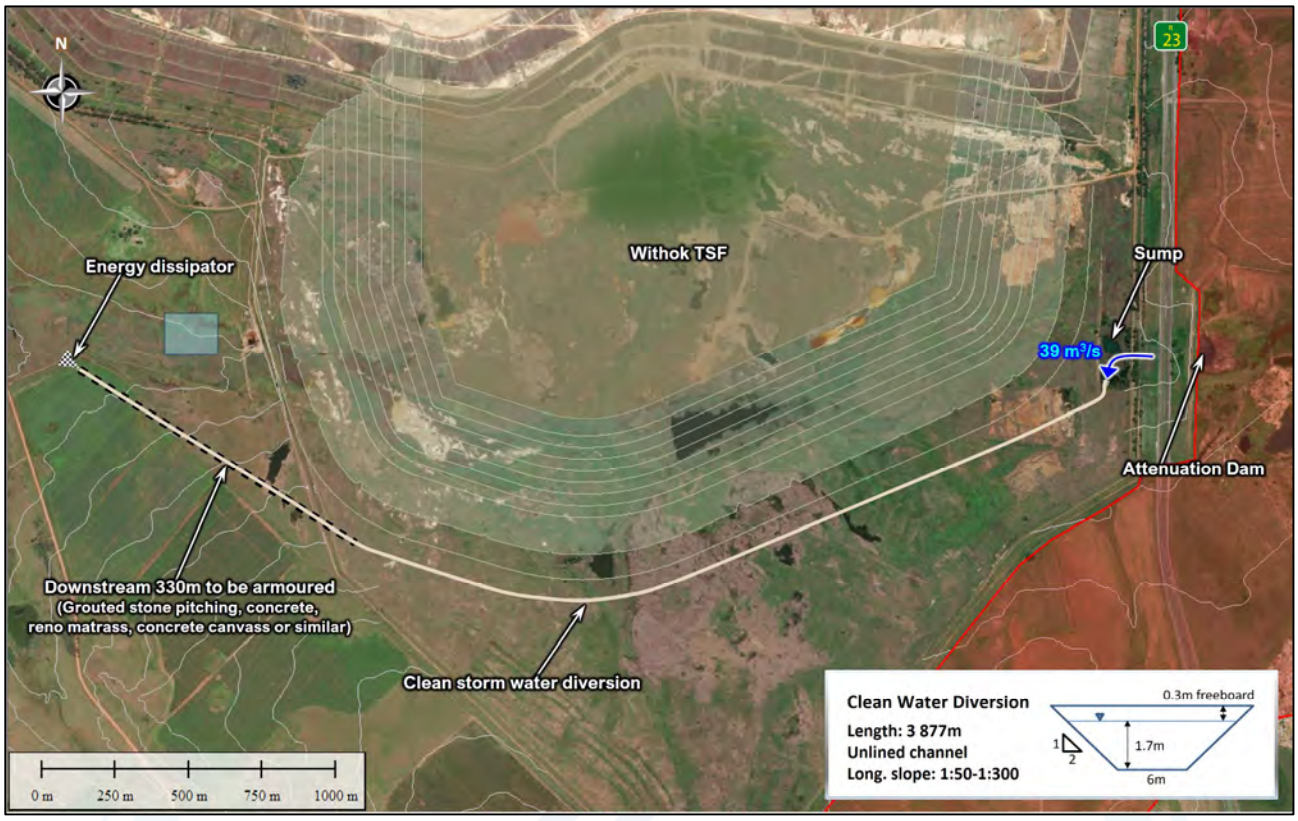


FIGURE 16: CLEAN STORM WATER DIVERSION

4.2.3 Storm water management between the clean storm water diversion and the catchment paddocks

A 28.6 ha catchment exists between the Clean storm water diversion channel and the catchment paddocks. Storm water generated in this catchment either drains to two low points, or drains out to the west, as shown in Figure 17.

The section of the catchment that drains west under gravity should be drained via an unlined trench, shown as the Gravity outflow trench in Figure 17. This trench collects clean water and runs through a clean area, so GN 704 is not applicable here. A 0.5 m deep trench will convey the 50-yr flood peak with no freeboard, but a smaller trench will also suffice. The purpose of the trench is to contain storm water within a confined area and route it quickly out of the area. The channel must discharge into the Clean storm water diversion. The channel armouring specified for the Clean storm water diversion trench will suffice as protection against the turbulence created by the merging of the two channels.

Storm water that drains to the two low points (at manholes 7 and 11) must be collected and routed to the drain flow collector pipe via penstocks. This is shown in Figure 18. The drain flow collector pipe soffit is above the NGL in both locations. Fill is required to elevate the NGL to 700mm above the collector pipe soffit, to allow the installation of the penstocks. This fill must be shaped to drain towards the catchment paddock. The

approximate area requiring fill is shown in pink in Figure 18. The drain flow collector pipe is discussed in Section 6.3.2.

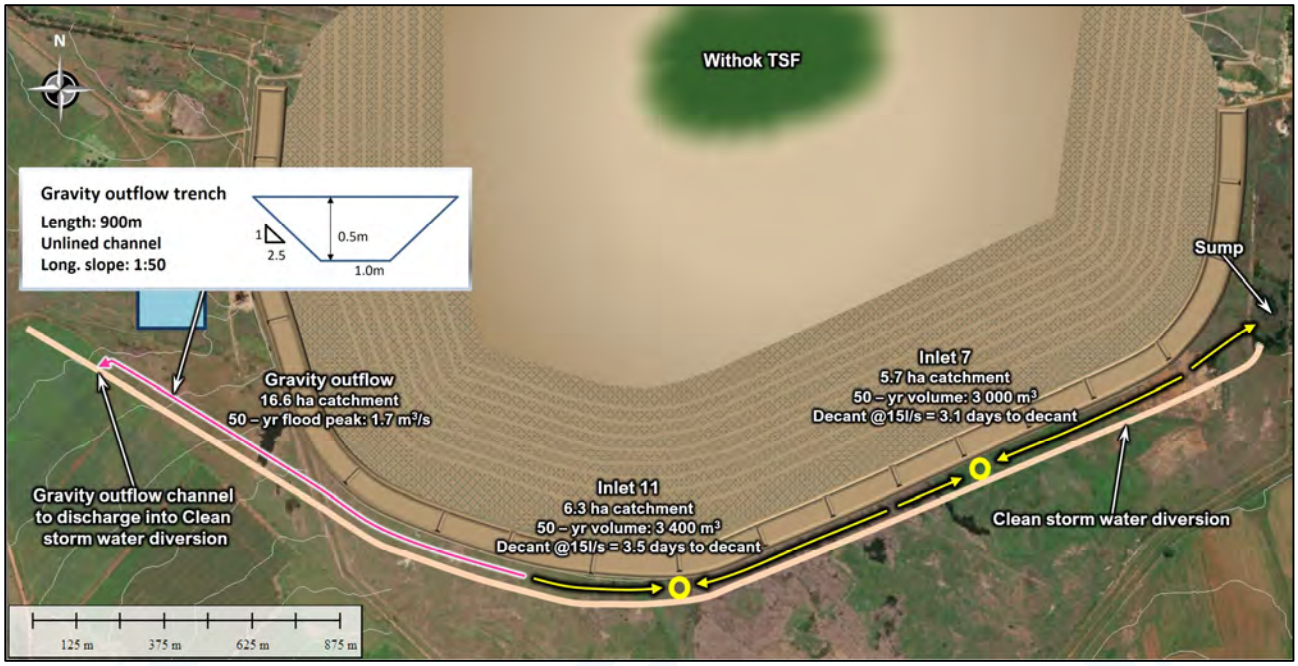


FIGURE 17: STORM WATER MANAGEMENT BETWEEN THE CLEAN STORM WATER DIVERSION AND THE CATCHMENT PADDOCKS

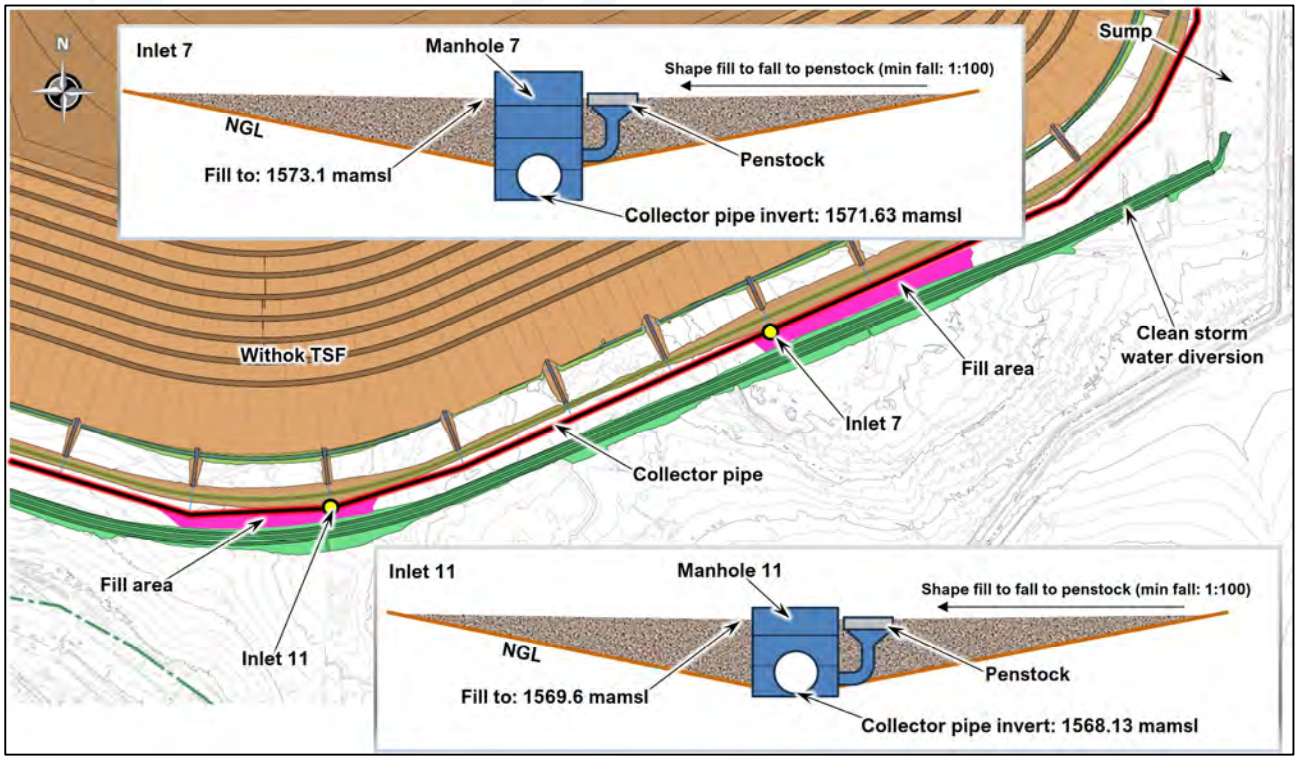


FIGURE 18: STORM WATER MANAGEMENT BETWEEN THE CLEAN STORM WATER DIVERSION AND THE CATCHMENT PADDOCKS

4.2.4 Southern external catchment storm water management

A 106.4 ha catchment drains to a low point along the Clean storm water diversion (discussed in Section 4.2.2) and shown in Figure 19. The embankment containing the Clean storm water diversion will form Impoundment 2. Water balance modelling has shown that this Impoundment will exceed 5 m water depth during periods of very high rainfall. This depth can be decreased by constructing a diversion channel that cuts out 63 ha of this catchment and diverts the storm water to the west. This diversion is referred to as the Southern clean storm water diversion. The details of this diversion is shown in Figure 19. A small impoundment (Impoundment 1) is required to bridge the valley. The impact of this diversion is shown in Figure 20. These water depths assume natural evaporation and seepage losses only with no mechanical removal of water from Impoundment 2.

A smaller catchment measuring 38.2 ha drains toward a low spot against the Clean storm water diversion. This low spot is referred to as Impoundment 3 in Figure 19. No storm water diversions are considered in this catchment for various reasons including storm water diversions in this catchment are impractical, the catchment is small, and the basin of Impoundment 3 is flat bottomed, thus decreasing water depths in impoundment 3.

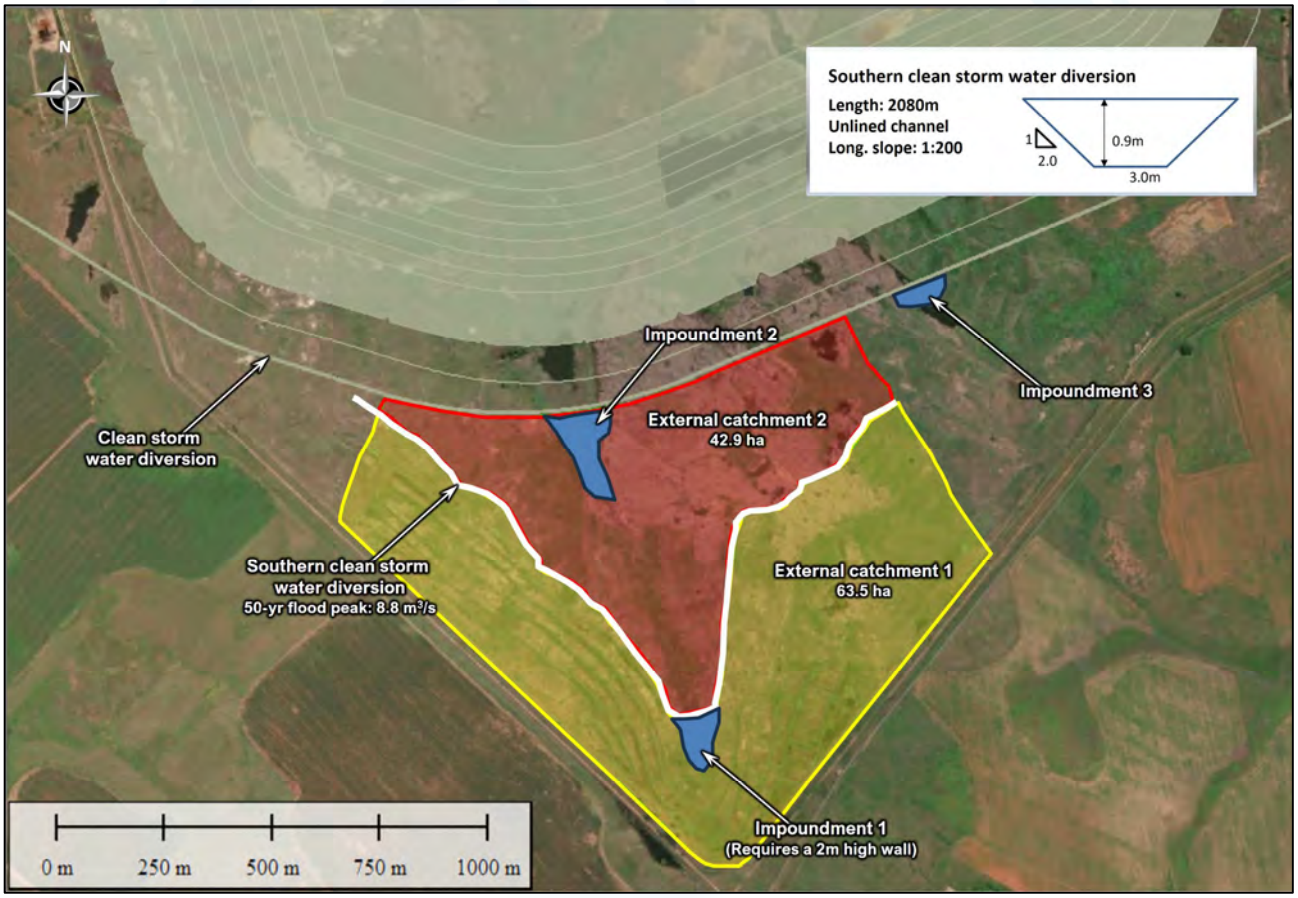


FIGURE 19: SOUTHERN EXTERNAL CATCHMENT STORM WATER MANAGEMENT

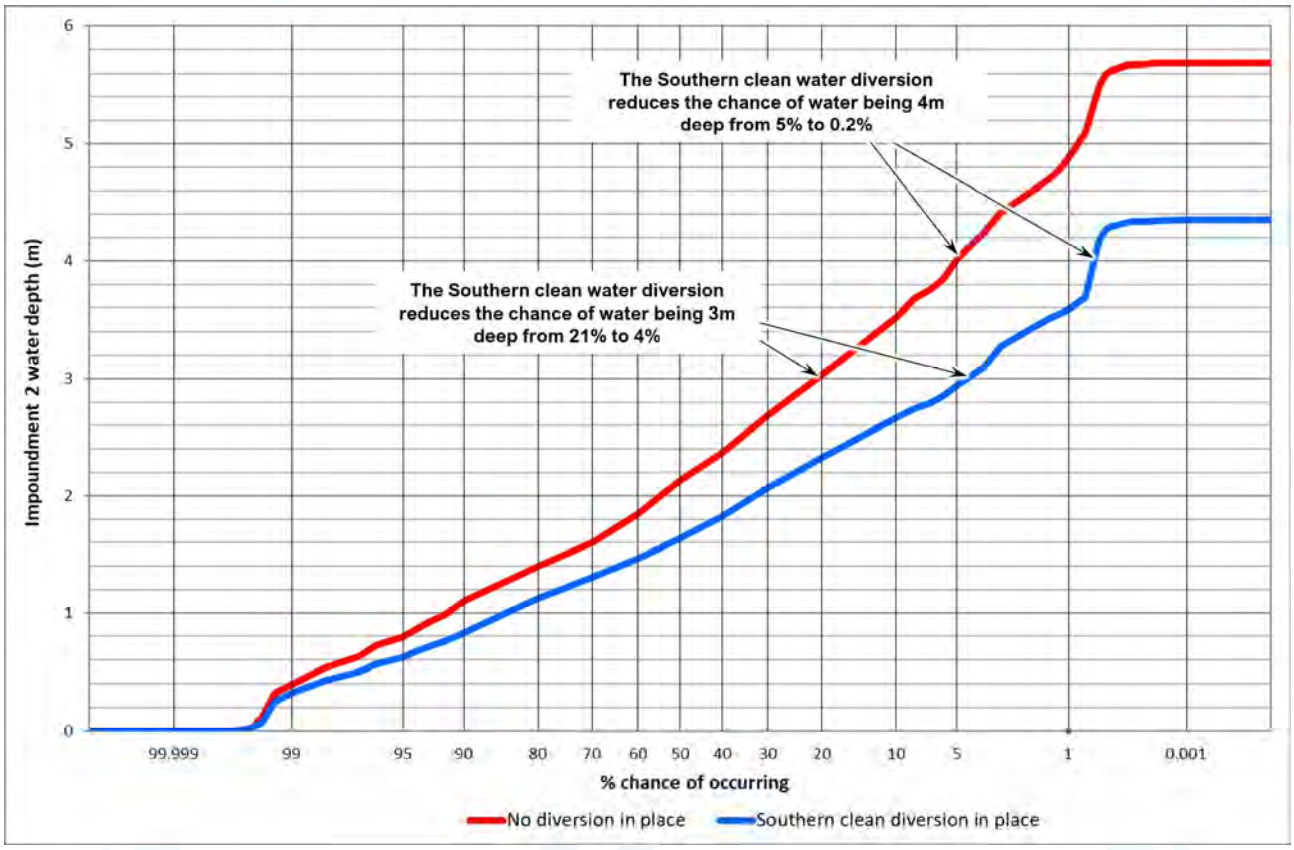


FIGURE 20: PROBABILITY DISTRIBUTION OF IMPOUNDMENT 2 WATER DEPTH

4.3 Brakpan Side Slope Storm Water Management

A portion of the southern flank of the Brakpan TSF is above the Withok TSF. Storm water from this portion will flow into the Withok TSF. The catchment is too large to route storm water around the Withok TSF, so storm water must be routed into the Withok TSF basin via chutes.

Paddocks, made from tailings, must be constructed at the base of each chute. This creates a stilling basin, preventing the Withok beach being washed away. 160 mm diameter outlet pipes discharge storm water out of the stilling basin paddock. These stilling basin paddocks are constructed the same way day wall paddocks are constructed. This structure will act the same way that a day wall paddock acts at a discharge point where the delivery line "throws" tailings into the paddock. The tailings at the base of the chute will scour and form a small pool. This is desired and will act as an energy dissipator.

The decant pipe must run against the interface between the Brakpan and Withok TSFs. The decant pipe must be routed over the chutes, with tailings platforms used to lift the pipe to the height of the chutes.

The storm water management concept is shown in Figure 21.

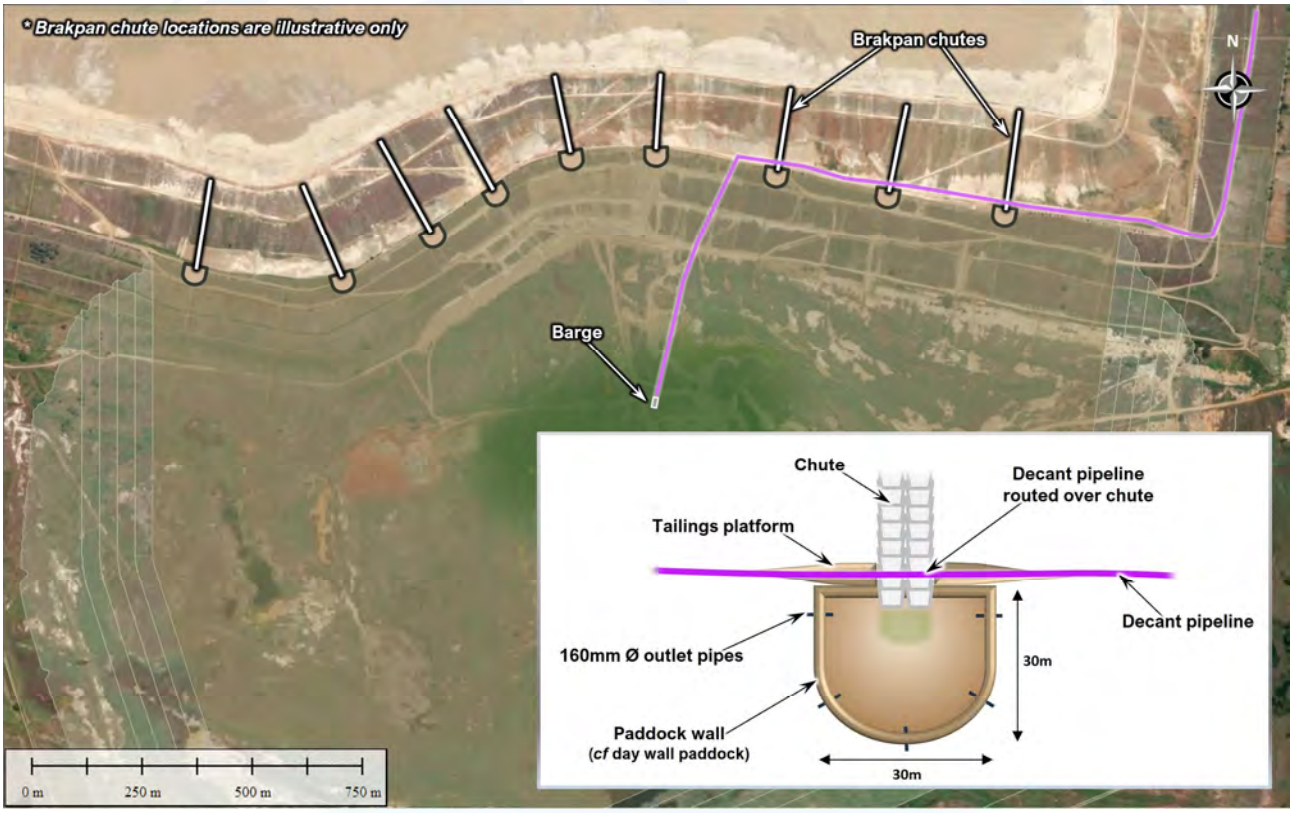


FIGURE 21: BRAKPAN SIDE SLOPE STORM WATER MANAGEMENT ABOVE THE WITHOK TSF

4.4 Side Slope Storm Water Management and Catchment Paddocks

4.4.1 Concurrent rehabilitation

Concurrent rehabilitation of the tailings storage facility side slopes is included in the design. This rehabilitation will take place in two phases:

- Cladding - mixture of waste rock and top soil
- Vegetation

To be conservative it is assumed that even though the side slopes will be concurrently rehabilitated, storm water from the side slopes will be managed as part of the dirty water management system. The design includes downstream raises till 1 610 mamsl. No concurrent rehabilitation of the tailings storage facility side slopes can be done while downstream raises are taking place.

4.4.2 Side slope storm water management

Storm water from the side slopes must be collected on the benches and routed to the closest chute. Water is then taken off the tailings storage facility via the chutes. The chutes are discussed in detail in Section 4.4.4.

The side slope storm water management principles are summarised as follows:

1. All storm water is conveyed to the catchment paddocks using the chutes, apart from the lower most slope section where there are no benches to convey the flow laterally towards a chute. An energy dissipation structure is required at the catchment paddock to dissipate excess flow energy.
2. All storm water flows as overland flow parallel to the chutes on the slopes between benches.
3. All storm water flows on the benches perpendicular towards a chute, and it is routed to the chute.
    a. Storm water flows against the inner toe of the bench.
    b. Storm water flow on a bench must flow to the closest chute.
4. No benches are allowed to be overtopped.
5. Ramp storm water flows to the nearest bench, and not through a bench crossing.
6. Storm water from the lower slope must be directed to the catchment paddocks, where it is temporarily stored before being discharged to the collector pipe system or evaporated.
7. No storm water must be allowed to pond on the tailings storage facility, apart from on the working bench.

The principles are shown schematically in Figure 22. The numbers in Figure 22 correspond to the numbered list above.

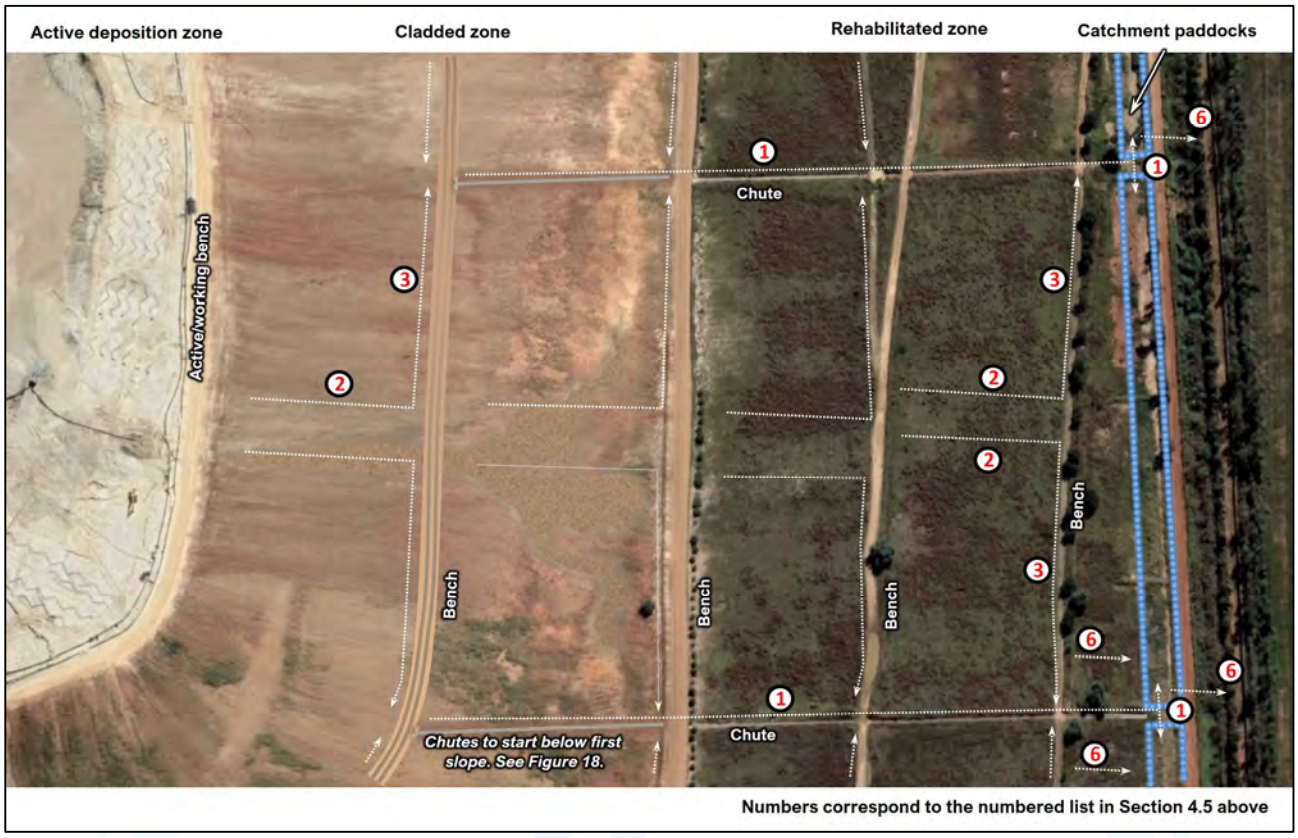


FIGURE 22: CLEAN STORM WATER MANAGEMENT CONCEPT PRINCIPLES

4.4.3 Catchment paddocks

Storm water from the side slopes of the tailings storage facility will collect in the 19 lined catchment paddocks. The liner below the paddocks limits infiltration losses. Water is temporarily stored in the paddocks before being released through paddock penstocks to the collector pipe and return water dam. A manhole in the collector pipe is available at every catchment paddock cross wall, so there is no need to transfer water between catchment paddocks. Each paddock will have a catchment paddock penstock connected to a manhole in the collector pipe. The drain flow collector pipe is discussed in Section 6.3. At final height, the 50-yr storm volume from the side slopes is 112 000 m^3. The paddocks can be responsibly emptied in under 4 days.

Side slope storm water management will have 2 phases:

1. Side slope management to when the tailings storage facility reaches approximately 1 630 mamsl.
2. Side slope management to final height.

The capacity of the catchment paddocks is sufficient to accommodate storm water from the side slopes up to 1630 mamsl. Thereafter, the side slopes become too big and insufficient attenuation capacity exists to buffer storm water inflows from large storm events. This would mean that either the collector pipe system or the return water dam becomes overwhelmed. To mitigate this, additional capacity must be added to the

catchment paddocks by raising the cross walls that are below the outer embankment crest elevation by 1 m. The outer embankment does not require raising. This adds 182 500 m^3 of temporary storage which is used to temporarily buffer high storm water inflows.

This is shown in Figure 23.

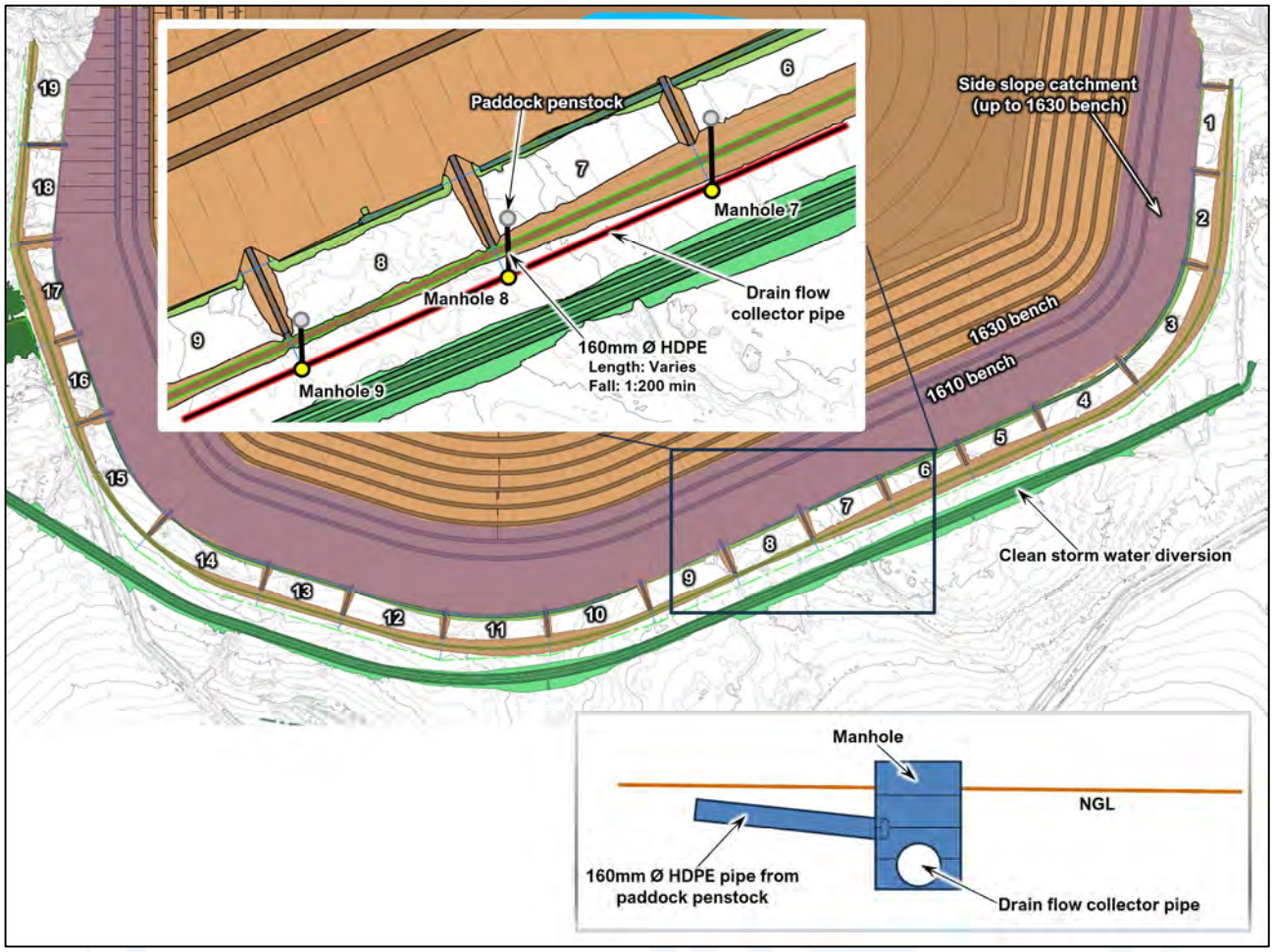


FIGURE 23: SIDE SLOPE STORM WATER MANAGEMENT

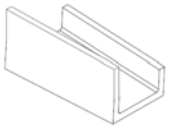
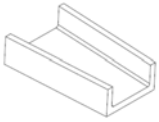
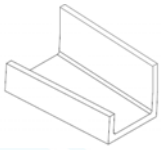
4.4.4 Chutes

Precast concrete chutes should be used to construct the chutes. Three types of chutes should be used:

- Left side chute (refer to Figure 24)
- Central chute
- Right side chute (refer to Figure 25)

The number of rows of chutes required increases as the tailings storage facility height above the chute increases. The number of rows of chutes required is shown in Table 2.

TABLE 2: MINIMUM CHUTE DIMENSIONS SHOULD BE INSTALLED:

Between benches…	Left side chute row	Central chute rows	Right side chute rows
(benches referred to by their elevations in mamsl)			
1 660 and 1 650*	0	0	0
1 650 and 1 640	0	1	0
1 640 and 1 630	0	2	0
1 630 and 1 620	1	0	1
1 620 and 1 610	1	1	1
1 610 and 1 600	1	2	1
1 600 and 1 590	1	3	1
1 590 and 1 580	1	3	1
1 580 and 1 570	1	4	1
1 570 and toe	1	4	1

**Note: No chute required on the top slope*

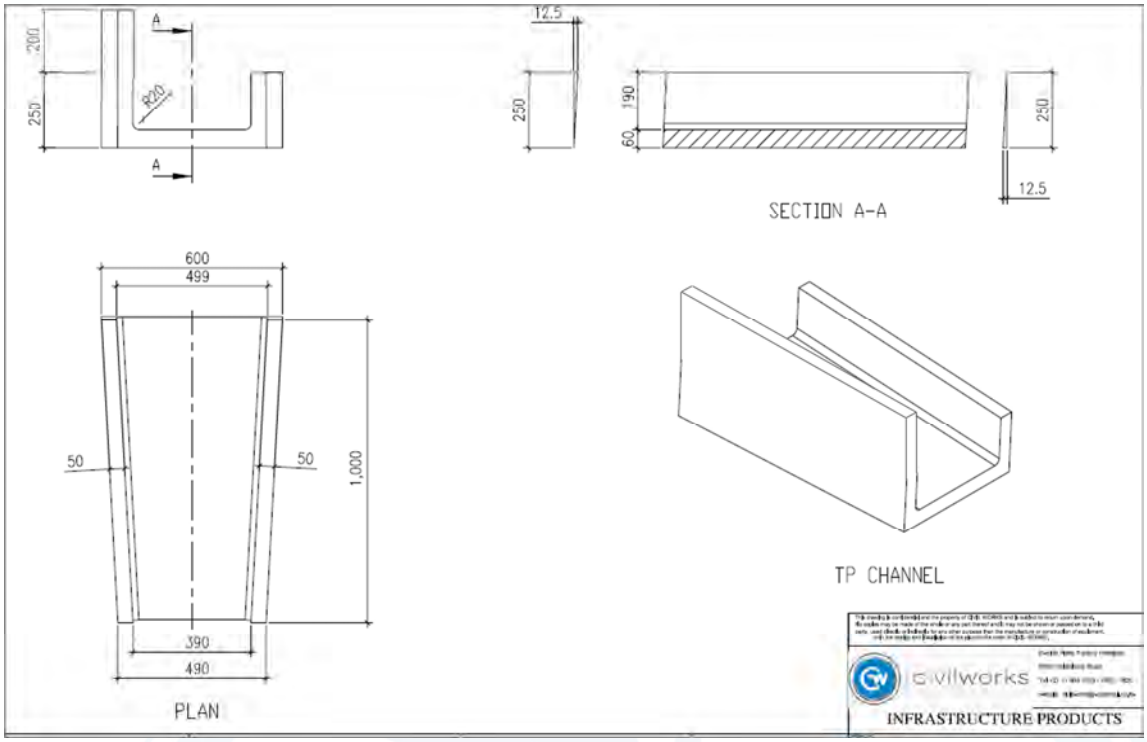


FIGURE 24: LEFT SIDE CHUTE

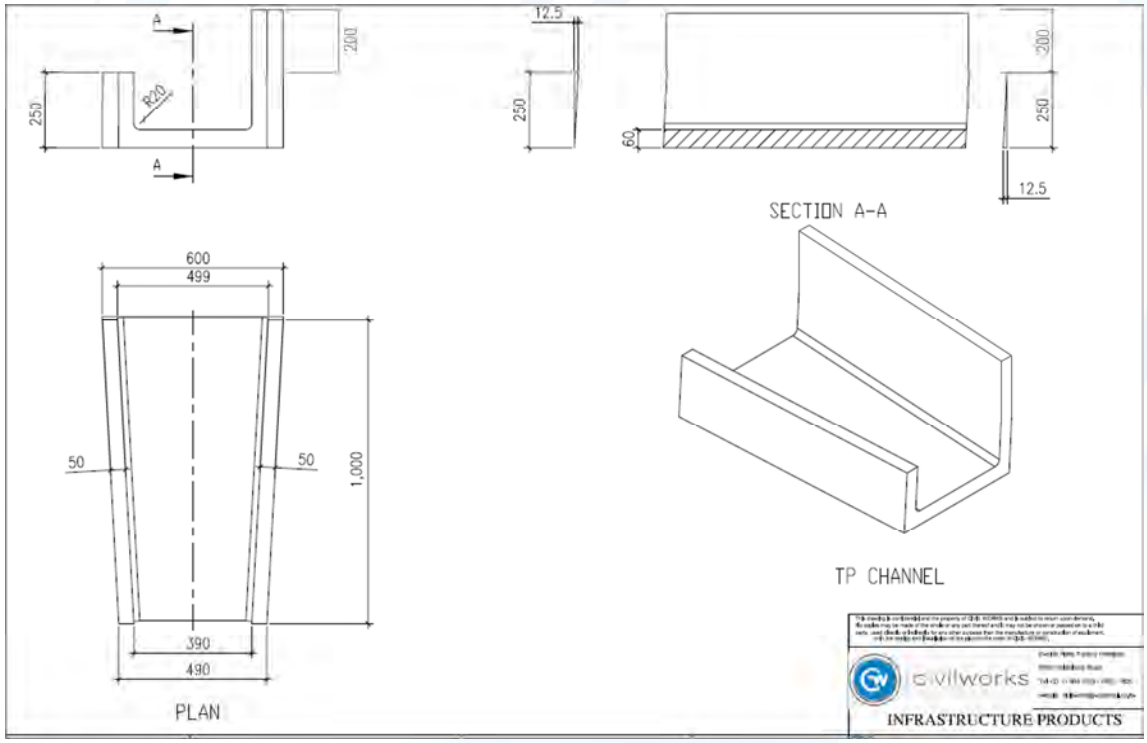


FIGURE 25: RIGHT SIDE CHUTE

No chutes are required on the top slope. Chutes are required from the 2nd slope downwards. Refer to Figure 26 and Figure 22.

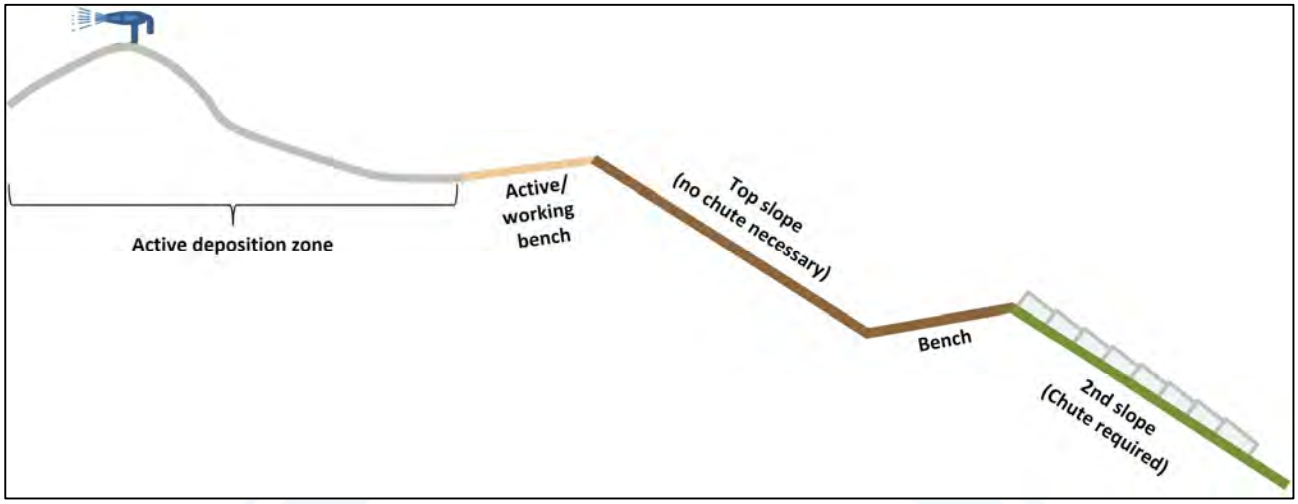


FIGURE 26: SLOPES WHERE CHUTES ARE REQUIRED

4.4.5 Chute entrances

The chute entrances must be protected by concrete mounds or barriers. Flow is concentrated at the chute entrances and this flow is often turbulent. This type of flow has significant erosive capacity and will erode unprotected sections of the bench outer berm. Benches must also be protected by a concrete apron where the chutes cross the benches. Figure 27 shows the infrastructure mentioned here.



FIGURE 27: CHUTE ENTRANCE INFRASTRUCTURE

4.4.6 Bench profiling and storm water management

All benches must be profiled as follows:

- Storm water must not pond on a bench. This is achieved by the correct longitudinal profile as shown in Figure 28.
- Storm water from the upslope catchment must flow against the inner toe of the bench, except at a chute where water must flow towards and into the chute entrance. This is achieved by the correct cross profile, as discussed below.

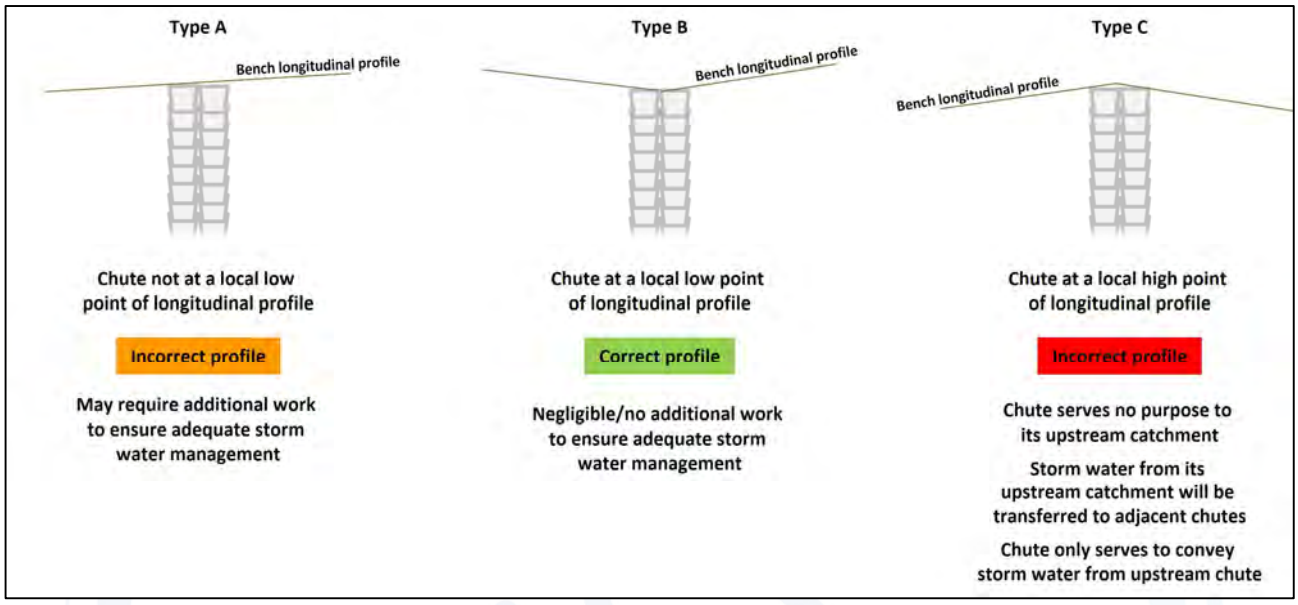


FIGURE 28: RECOMMENDED BENCH LONGITUDINAL PROFILE

All benches must have the cross profile as shown in Figure 29. This allows water to flow against the inside of the bench, rather than against the outer bench berm. In the vicinity of a chute entrance, the cross profile must be reversed to direct water towards the chute entrance, as shown in Figure 30.



FIGURE 29: REQUIRED BENCH CROSS PROFILE

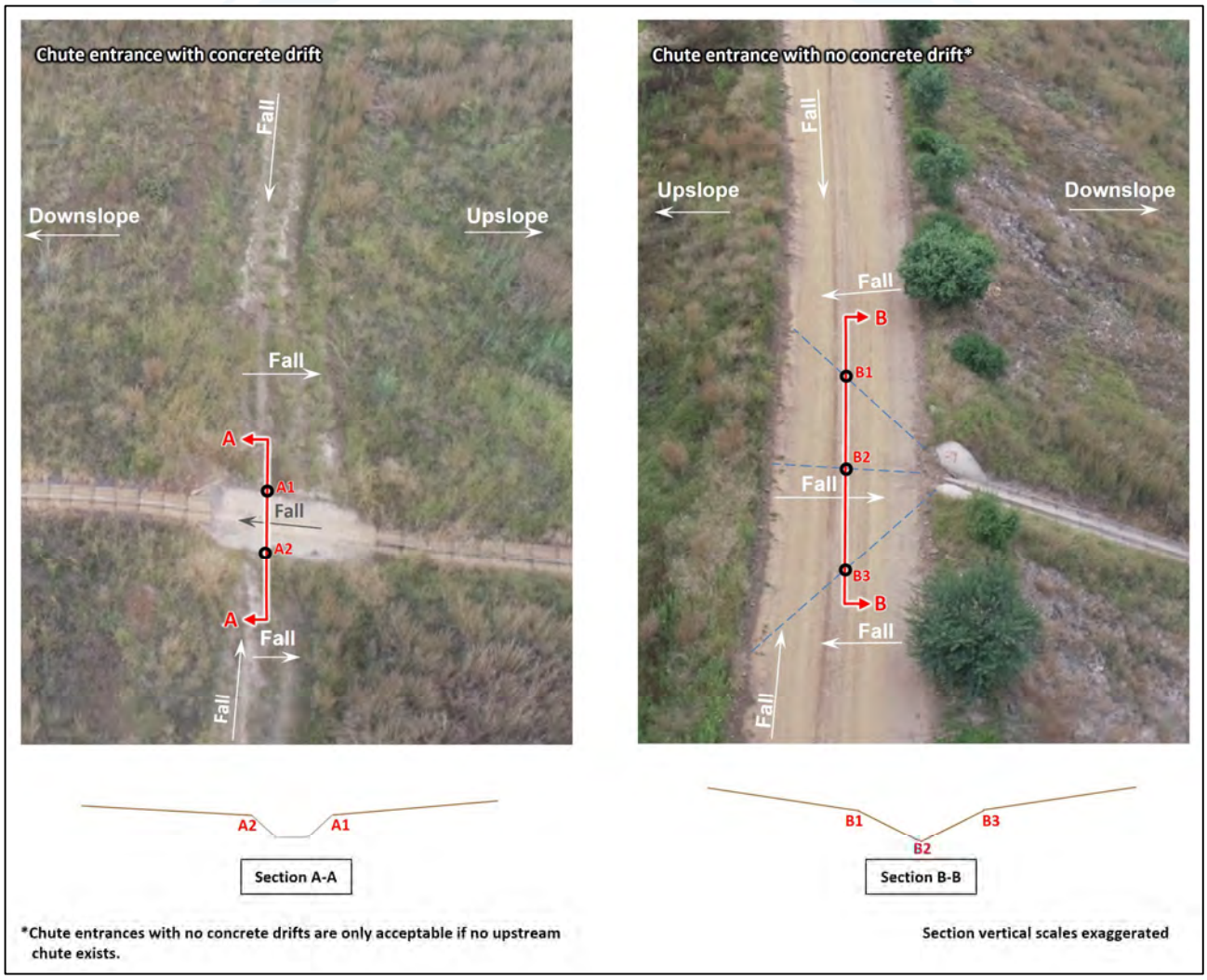


FIGURE 30: REQUIRED BENCH CROSS PROFILE IN THE VICINITY OF A CHUTE

4.4.7 Ramp storm water management

Ramps will be required to access the tailings storage facility. To prevent erosion on ramps, the following is recommended:

- Upstream catchments must be minimised to only the tailings storage facility side slope directly above the ramp. This means that no bench flow can be allowed to flow down a ramp. This is the key driver of ramp erosion. This is shown in Figure 32.
- Similar to the benches, the ramps must be sloped inwards so that water flows against the tailings storage facility side slope, as shown in Figure 31 and Figure 29.
- Storm water collected on benches must never be allowed to flow down a ramp. This storm water must be directed to the nearest downstream chute.

Chutes that cross a ramp should be managed as per Figure 34. The ramp is essentially a Type A bench (refer to Figure 28).

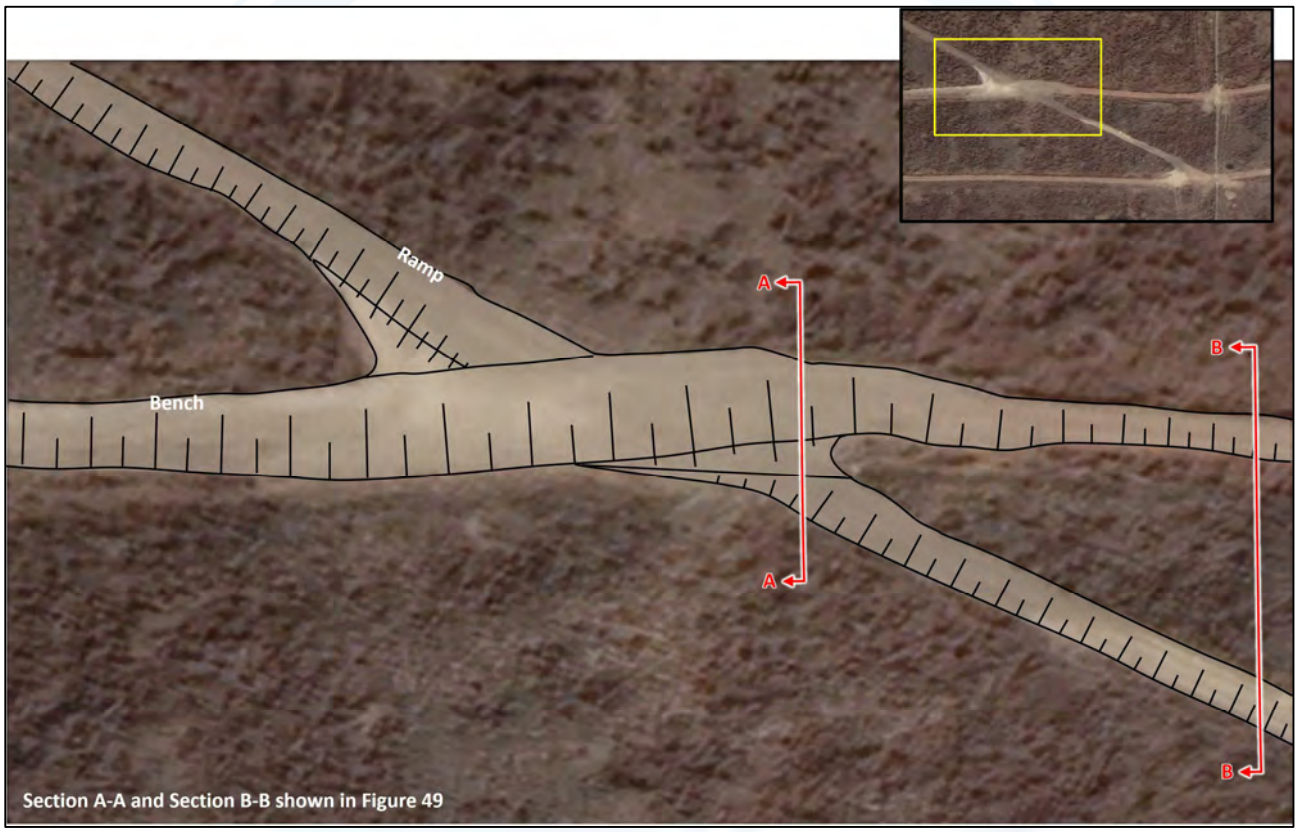


FIGURE 31: RAMP STORM WATER MANAGEMENT AT BENCH INTERSECTION



FIGURE 32: RAMP STORM WATER MANAGEMENT

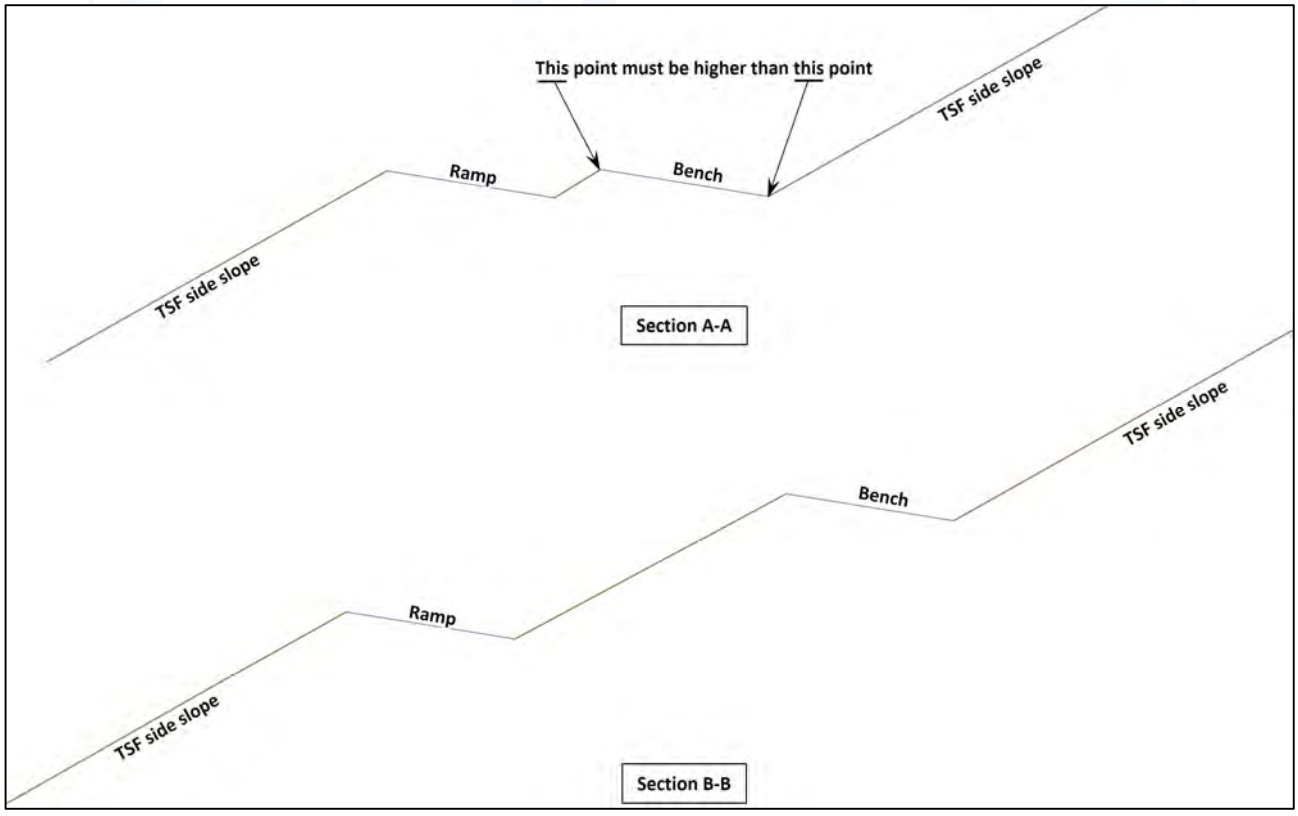


FIGURE 33: TYPICAL RAMP AND BENCH PROFILE

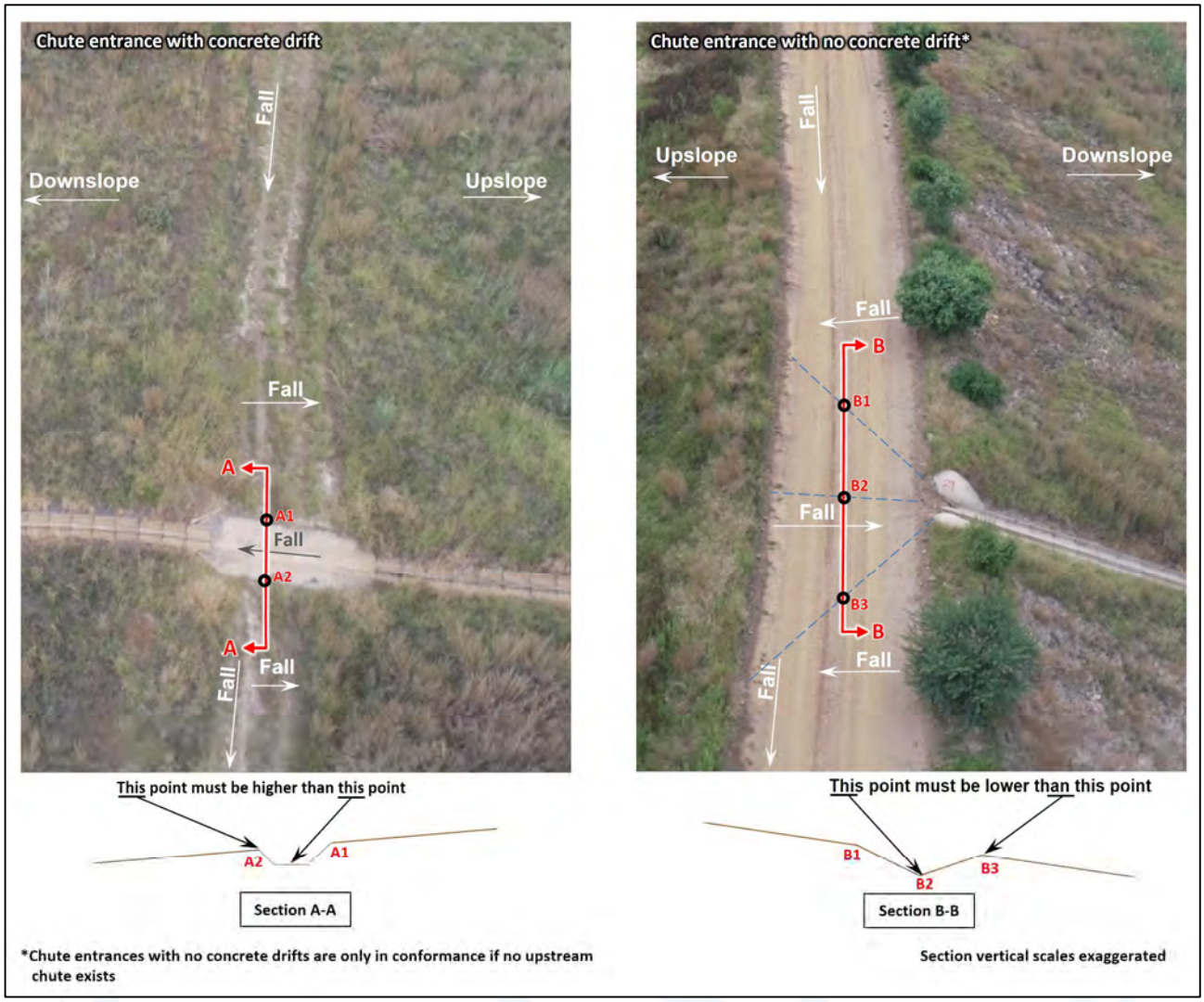


FIGURE 34: RAMP PROFILING IN THE VICINITY OF A CHUTE

4.4.8 Chutes crossing access roads (LDV crossings)

Where chutes cross a bench *that is not traversed by ADT traffic*, a concrete drift is required to be installed at the crossing. This is the same approach that has been used historically on the Brakpan TSF. The dimensions of the drift are shown in Figure 35.

Hydraulically, the crossings are very inefficient and significant water accumulation will occur at these crossings, along with turbulence and eddies. The drift is required to preserve the integrity of the roadway in the vicinity of the crossing. The drift may overtop during high-flow events. This is considered nominal behaviour and will occur for short periods of time. The bench outer berm will contain water that overflows the drift and flow velocities at the overflow points will be negligible.

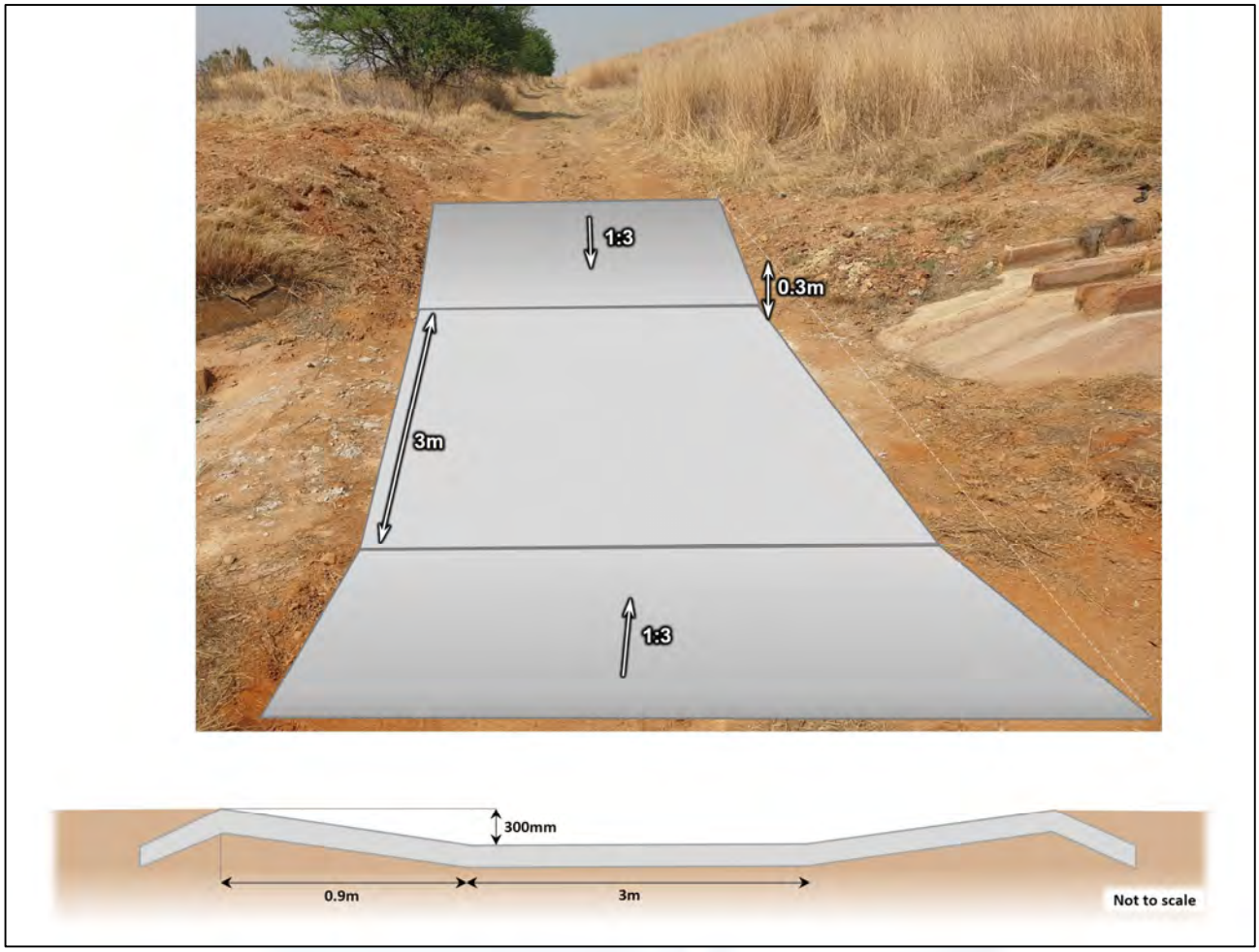


FIGURE 35: CONCRETE DRIFT FOR LDV TRAFFIC

4.4.9 Chutes crossing access roads (ADT crossings)

Some roads may be used as heavy haulage roadways. These roadways are used by ADT vehicles. Where chutes cross these roadways, a shallow concrete drift is required to be installed at the crossing. The shallow concrete drift is designed to impose a minimum interference on ADT traffic flow, while still maintaining the integrity of the crossing. The concrete will be required to be reinforced with an appropriate mesh or steel reinforcing cage. The dimensions of the drift are shown in Figure 36.

Hydraulically, the crossings are very inefficient and significant water accumulation will occur at these crossings, along with turbulence and eddies. The drift is required to preserve the integrity of the roadway in the vicinity of the crossing. The drift may overtop during high-flow events. This is considered nominal behaviour and will occur for short periods of time. The bench outer berm will contain water that overflows the drift and flow velocities at the overflow points will be negligible.

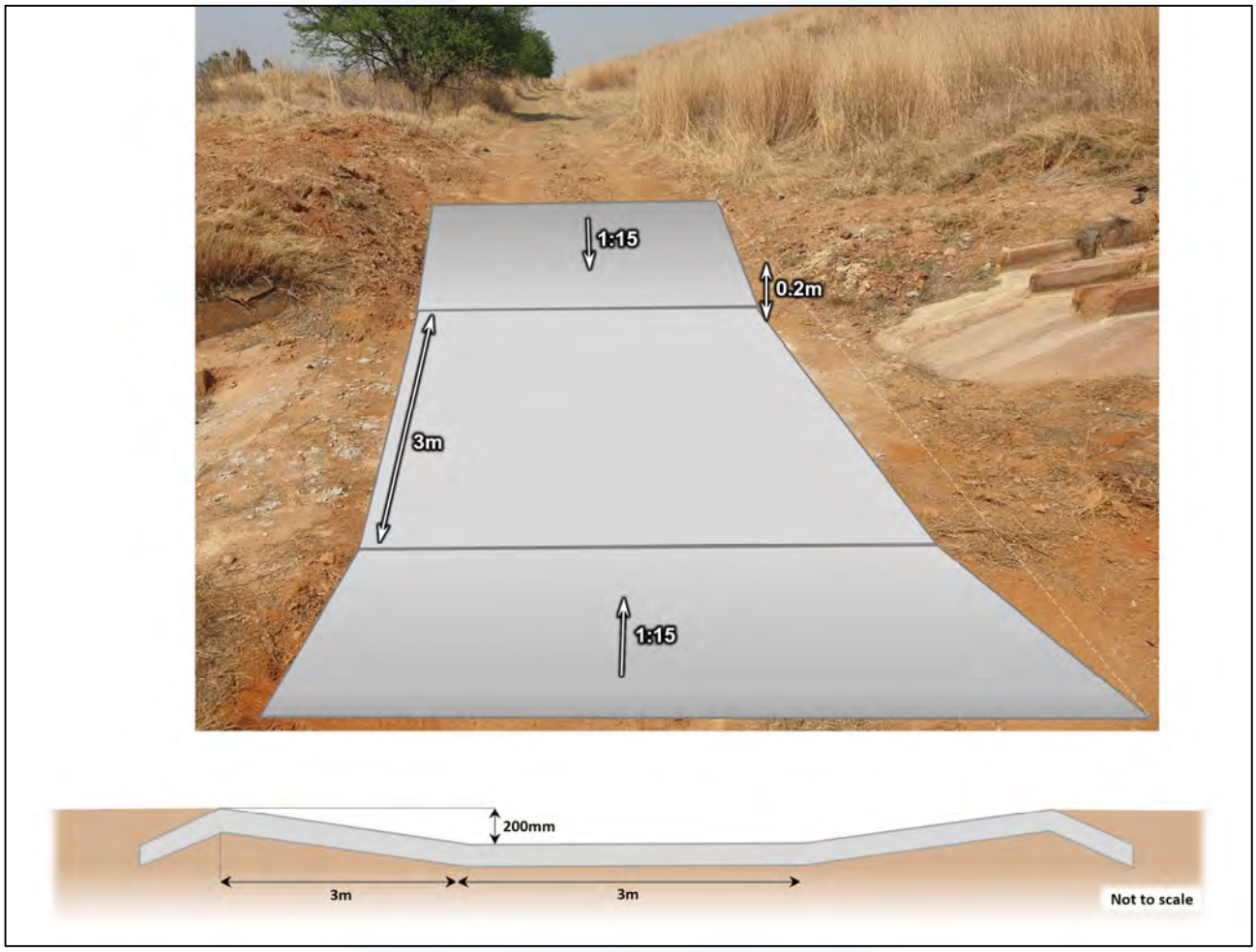


FIGURE 36: CONCRETE DRIFT FOR ADT TRAFFIC

5. FREEBOARD ANALYSIS

The freeboard analysis calculated the TSF freeboard at final height.

5.1 Legal and Best Practice Requirements

The legal and best practice freeboard related requirements are summarised in Table 3.

TABLE 3: LEGAL AND BEST PRACTICE FREEBOARD RELATED REQUIREMENTS

Law/Guideline	Regulation	Section/ Clause	Pool location and storage	Pool capacity	Freeboard	Design storm	Law/Guideline
SANCOLD, Volume II, Guidelines on Freeboard for Dams					200-yr, 24-hr storm event plus wave run-up	200-yr , 24-hr storm	SANCOLD, Volume II, Guidelines on Freeboard for Dams
South African National Water Act, Act 36 of 1998	GN 704	6.b, 6.d					South African National Water Act, Act 36 of 1998
		6.e			0.8 m above full supply level		
	GN 139		>50 000 m^3 (and >5 m high), TSF must be classified as a dam with a safety risk				
Mineral and Petroleum Resources Development Act, Act No. 28 of 2002	GN527	73.5.d.i				100-yr, 24-hr	Mineral and Petroleum Resources Development Act, Act No. 28 of 2002
		73.5.d.ii			0.5 m above expected maximum water level		

SANS 10286 of 1998, First edition (SABS 0286)		10.4.11.1		Normal operating level plus 100-yr, 24-hr storm		100-yr, 24-hr storm	SABS 0286
		10.4.11.2			Maximum wave height or 0.5 m in addition to 10.4.11.1		
SANS 10286 of 20XX, Edition 2		10.4.4.2		Maintain acceptable level of risk			SANS 10286 of 20XX, Edition 2
		10.4.4.3			Maximum wave height calculated according to SANCOLD		
National Environment Management: Waste Act, Act No.59 of 2008	GN632	7.4.c			0.5 m above expected maximum water level		National Environment Management: Waste Act, Act No.59 of 2008
		7.4.d	>50 m from the walls*				
GISTM**		Annex 2 Table 2				10 000-yr (PMP)	GISTM

** Although not specified, this is often associated with the 50-year storm and is associated with the 50-yr storm event in this analysis.*

*** The GISTM classification for the TSF has been classified as "Extreme".*

5.2 Freeboard Targets

The freeboard targets are guided by legislation and best practice, and are the most stringent of:

- 50-yr design storm plus 0.8 m dry freeboard (GN 704),
- 100-yr design storm plus 0.8 m dry freeboard (SANS 10286)
- 10 000-yr design storm (GISTM)
- Pool > 50 m from the outer embankments following a 50-yr design storm (GN 632).

These targets are discussed in more detail in Section 5.1. The PMP (high) storm is added to the freeboard analysis for interest. The PMP (low) is similar to the 10 000-yr storm (refer to Section 2.3.1) and is not included.

5.3 Freeboard Analysis Results

Various freeboard related terminology is referred to in this section. This is shown graphically in Figure 37.

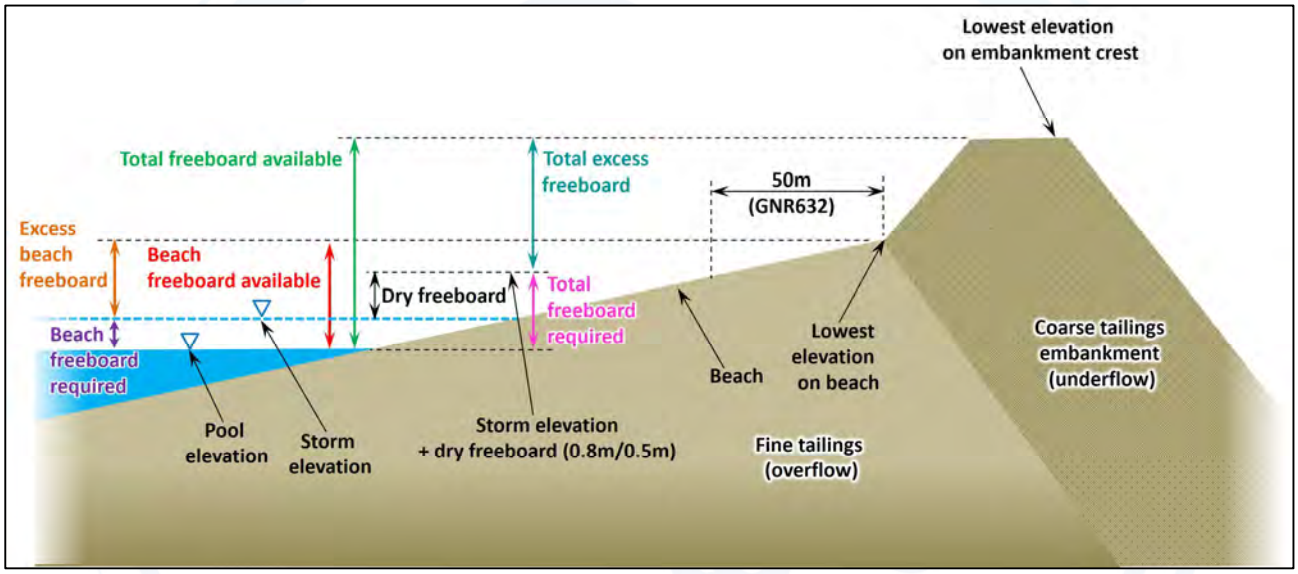


FIGURE 37: FREEBOARD TERMINOLOGY REFERRED TO IN THIS REPORT

The current actual freeboard, as well as the required freeboard targets are summarised in Table 4 and Table 5. The likely pool locations associated with the design storms are shown in Figure 38 and Table 5.

TABLE 4: FREEBOARD TARGET COMPLIANCE SUMMARY

Phase	Summary	Sufficient beach freeboard	Sufficient total freeboard	50-yr pool remains outside of the 50 m buffer zone
End of life	**Compliant**	**Yes**	**Yes**	**Yes**

TABLE 5: FREEBOARD ANALYSIS (END OFLIFE)

Item	Description	Units	Value			
1	Catchment area	ha	257.1 ha			
2	Design storm		50-yr, 24 hr plus 0.8m	100-yr, 24 hr plus 0.5m	10 000-yr, 24 hr	PMP, 24 hr high
3		mm	119	136	281	405
4	Storm volume (runoff factor assumed)	m^3	260 036 (85%)	314 665 (90%)	707 946 (98%)	1 030 761 (99%)
5	Pool elevation	mamsl	1 671.5			
6	Lowest elevation on beach	mamsl	1 673.5			
7	Lowest elevation on embankment crest	mamsl	1 680.0			
8	Storm elevation	mamsl	1 671.7	1 671.8	1 672.1	1 672.4
9	Beach freeboard available	mamsl	2.0			
10	Beach freeboard required	m	0.2	0.3	0.6	0.9
11	Excess beach freeboard	m	1.8	1.7	1.4	1.1
12	Storm elevation + 0.8 m/0.5 m*	mamsl	1 672.5	1 672.3		
13	Total (vertical) freeboard available	m	8.5			
14	Total (vertical) freeboard required**	m	1.0	0.8	0.6	0.9
15	Excess total (vertical) freeboard	m	7.5	7.7	7.9	7.6

** Note: Refer to item 2 in the table for dry freeboard addition – either 0.8m or 0.5m.*

*** Note Dry freeboard is not added to the 10 000-yr and PMP storms.*

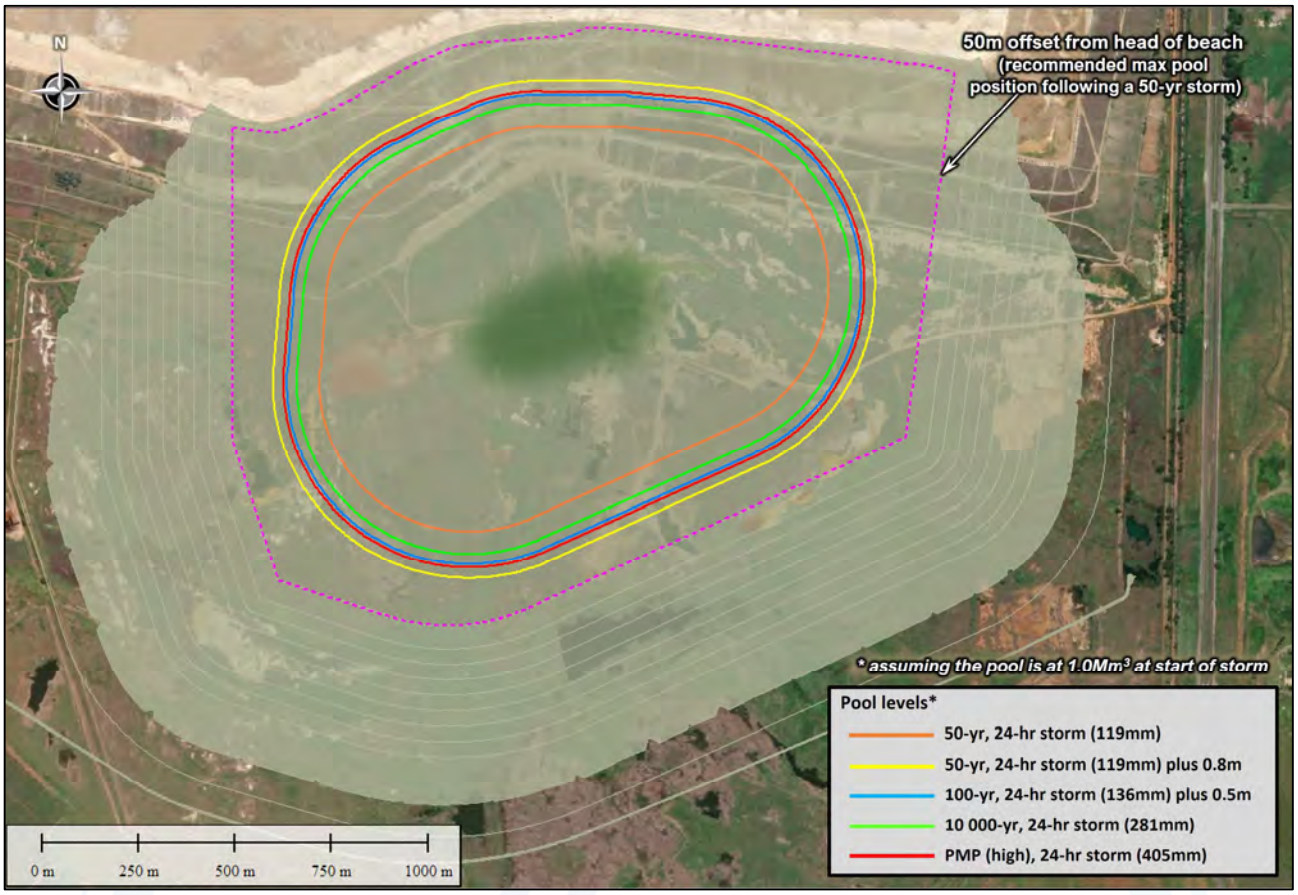


FIGURE 38: LIKELY POOL LOCATIONS AS A RESULT OF EXTREME RAINFALL EVENTS (END OF LIFE)

5.3.1 Commentary on freeboard results (current situation)

The results show the following:

- 50-yr design storm plus 0.8 m dry freeboard (GN 704) **Compliant**:
  - The total freeboard is sufficient to accommodate this requirement with 7.5 m excess total freeboard.
- 100-yr design storm plus 0.5 m dry freeboard (SANS 10286) **Compliant**:
  - The total freeboard is sufficient to accommodate this requirement with 7.7 m excess total freeboard.
- 10 000-yr design storm (GISTM) **Compliant**:
  - The basin can accommodate the 10 000-yr design storm with 1.4 m excess beach freeboard.
- Pool > 50 m from the outer embankments following a 50-yr design storm (GN 632) **Compliant**:
  - The 50-yr design storm level will result in the pool being more than 245 m from the head of beach.

6. WATER BALANCE

6.1 Modelling

A daily time step GoldSim model was constructed to simulate the water balance of the Withok TSF complex, within the battery limits discussed in Section 1.1. The model includes a stochastic rainfall generator to generate rainfall sequences required for probabilistic analysis. The stochastic rainfall calibration is discussed in Section 2.4. The model simulates the tailings storage facilities and the water dam in detail.

Catchments are modelled using a modified SCS model, accounting for antecedent moisture conditions. The catchments incorporate a 3-layer cascading system which accounts for interception and depression storage, moisture budgeting in the vadose zone, interflow, and deep seepage.

Reservoirs (including the pool) are modelled in detail with daily evaporation losses, direct rainfall, and storm water inflows being accounted for. The pollution control dam was sized in accordance with GN 704 of the South African National Water Act, Act 36 of 1998. The dam was sized to achieve a 50-year spillage frequency.

6.1.1 Probabilistic modelling (dynamic footprints)

A probabilistic analysis was used to determine how the tailings storage facility complex behaves under various rainfall conditions. The results are detailed in Section 6.3. 300 stochastically generated rainfall sequences were modelled, with annual rainfall ranging from 224 mm to 1 314 mm. The stochastic rainfall generator and its calibration is discussed in Section 2.4.

The model simulates the period 2027 to 2051, with a 2-year model warm-up period prior to 2027. This warm-up period is required to ensure that all assumed start moisture conditions in the catchment modules have no influence on the water balance calculations post 2027. The results during this warm up period are not relevant. The model accounts for antecedent moisture conditions in all catchments so this is pertinent.

The tailings storage facility footprints are modelled dynamically. These footprints are sourced from the capacity analysis and survey data. The deposition rate is static during the simulation as the deposition rate will be a constant 1.3Mtpm.

6.1.2 Time series modelling (static footprints and deposition rates)

A static footprint scenario was modelled to produce a water balance diagram and to calculate the average return. The end of life scenario was selected for this purpose.

The 105-year recorded daily rainfall record (discussed in Section 2.1) was passed over the TSF complex to determine the average water balance. These average water balance values are required for environmental authorisations and provide the reader with typical system flows for the TSF complex.

6.2 Slurry Water

The slurry water breakdown is shown in Figure 39.

Withok TSF

Combined slurry in pipe		
Deposition rate	1,300,000	tpm
SG	2.65	
Slurry density	44.05%	solids by mass
RD	1.378	
e	3.365	
water content	1.270	m^3/tonne
w	127%	
Total water in slurry	1,650,877	m^3/month
Total water in slurry	54,238	m^3/day
Total water in slurry	2,260	m^3/hr
Dry density	0.61	tonne/m^3

Split 20%

Cyclone underflow		
Deposition rate	260,000	tpm
SG	2.65	
Slurry density	76.08%	solids by mass
RD	1.900	
e	0.833	
water content	0.314	m^3/tonne
w	31%	
Total water in slurry	81,746	m^3/month
Total water in slurry	2,686	m^3/day
Total water in slurry	112	m^3/hr
Dry density	1.45	tonne/m^3

Cyclone overflow		
Deposition rate	1,040,000	tpm
SG	2.65	
Slurry density	39.86%	solids by mass
RD	1.330	
e	3.998	
water content	1.509	m^3/tonne
w	151%	
Total water in slurry	1,569,132	m^3/month
Total water in slurry	51,553	m^3/day
Total water in slurry	2,148	m^3/hr
Dry density	0.53	tonne/m^3

FIGURE 39: SLURRY WATER BREAKDOWN

6.3 Drain flow management

6.3.1 Drain flow simulations

Drain flows are collected from the various drains and piped to a collector pipe system that runs around the perimeter of the tailings storage facility. The collector pipe system is designed so that it will flow half full, or less at peak discharge. Although the water balance shows that average drain flow is expected to be approximately 4 350 m^3/day at full basin development, the system has been designed for drain flows of 4 800 m^3/day, as stochastic seepage flows reach 4 800 m^3/day at the 99th percentile at full basin development. This is shown in Figure 40.

Additionally, some seepage from the Brakpan TSF is also accounted for as well as the storm water from catchment paddock number 7 discharging to manhole 8, as detailed in Section 4.3). These additional flows are not shown in Figure 40, but are accounted for in the collector pipe sizing, discussed in the following section.

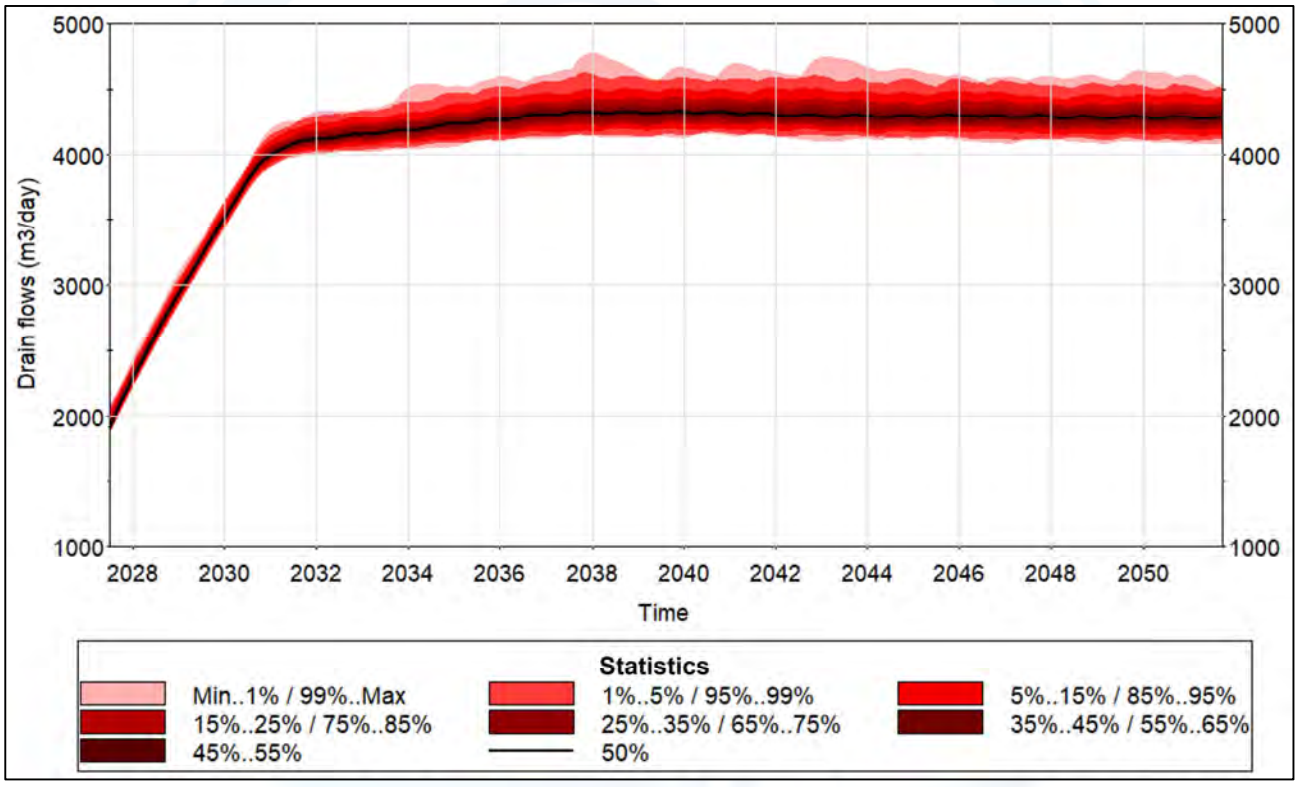


FIGURE 40: SIMULATED DRAIN FLOW

6.3.2 Collector pipe sizing

The collector pipe has a total length of 4 347 m. It is split 608 m / 3 739 m north / south of the outlet to the return water dam. The collector pipe has a longitudinal gradient of 1:250 (V:H). The pipe sizing is detailed below.

TABLE 6: DESIGN FLOW RATES FOR THE COLLECTOR PIPE

Line	Total flow	Storm water	Drain flow
Line 1 - 17(l/s)	87	40	47
Line 20 - 18 (l/s)	39	0	39*
Total (l/s)	126	40	86
Total (m^3/day)	10 900	3 460	7 440

**Includes seepage from the Brakpan TSF.*

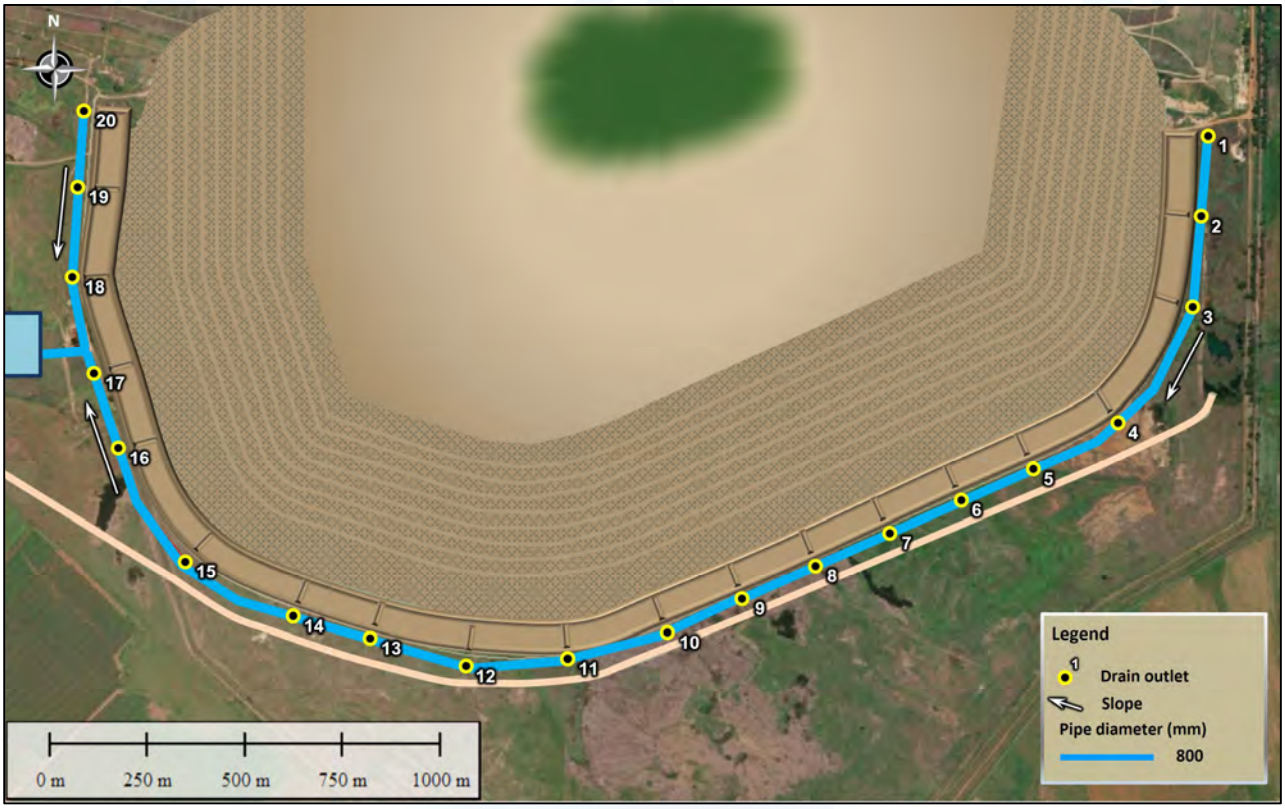


FIGURE 41: COLLECTOR PIPE SYSTEM

6.4 Pool Management and Decant Results

6.4.1 Barge decant

The barge must have a capacity of 54 000 m^3/day (3 000 m^3/hr @ 18 hrs/day). This is approximately 100% of slurry water requirements (refer to Figure 39 for slurry water breakdown). The design storm decant times using this pumping capacity are considered acceptable and are summarised in Table 7.

This pump capacity is designed for operational flexibility and extreme storm management. The normal operating barge decant will be significantly less than this, as shown in the water balance outputs in Figure 42. The simulated barge pumping volumes are shown in Figure 42.

TABLE 7: DESIGN STORM DECANT RATES

Design storm	Storm volume	Decant rate	Time to decant
50-yr, 24-hr	261 500 m^3	54 000 m^3/day (3 000 m^3/hr @ 18hrs/day)	4.8 days
10 000 yr, 24-hr	673 100 m^3		12.5 days
10 000 yr, 24-hr	802 900 m^3		38.2 days

** Note: Times exclude process water pumping and meteorological losses or gains during this period*

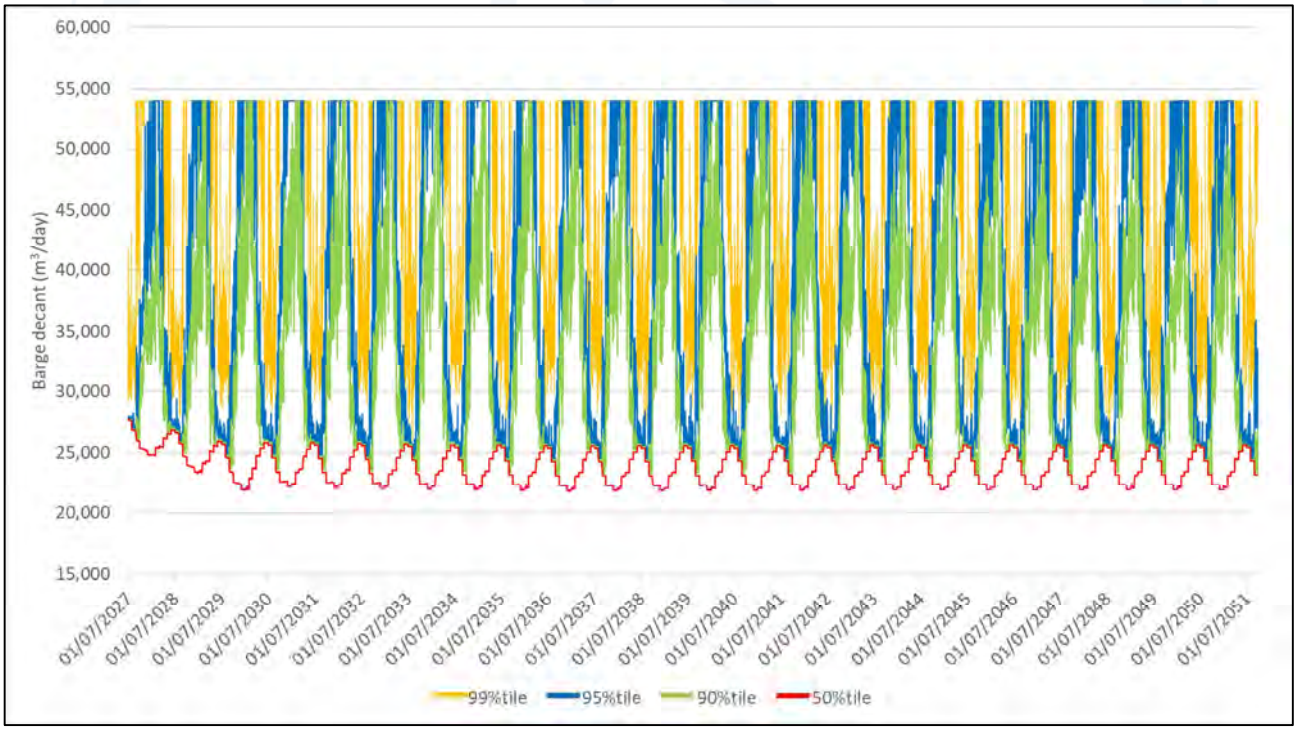


FIGURE 42: SIMULATED BARGE PUMPING

6.4.2 Pool management

The simulated pool storage is shown in Figure 43. The results show that the pool storage is not excessive, and the proposed decant infrastructure is sufficient to manage the pool and provide adequate freeboard. At peak simulated pool storage, the pool is estimated to be approximately 50% of the basin capacity, assuming the basin has a capacity of 4.5 Mm^3. The maximum simulated storage occurred as a result of a simulated storm depth of 400mm. This is equivalent to the PMP (high) storm depth (refer to Table 1 on page 6 for extreme storm depths).

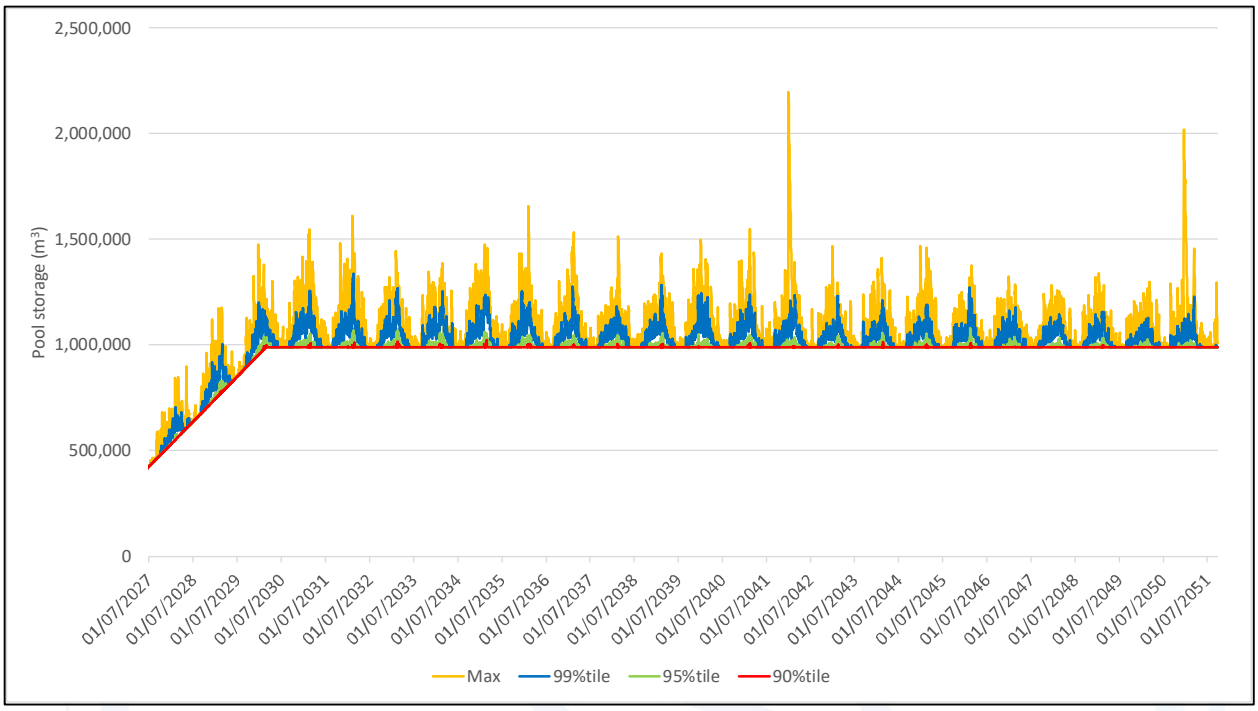


FIGURE 43: SIMULATED POOL STORAGE

6.5 Return Water Dam

The return water dam must have a capacity of at least 65 000 m^3 to comply with GN 704 of the South African National Water Act. This assumes that water will be returned to process at up to 9 800 m^3/day. The simulated storage is shown in Figure 44. The simulated pumping return to process is shown in Figure 45.

The inflow water to the return water dam comprises drain flow (discussed in more detail in section 6.3) and dirty side slope water (discussed in more detail in Section 4.3). The simulations show that return water dam storage capacity in excess of 65 000 m^3 will be utilised during periods of extreme rainfall if available. Additional storage beyond 65 000 m^3 is not required for legal compliance but will provide additional operational flexibility and is recommended.

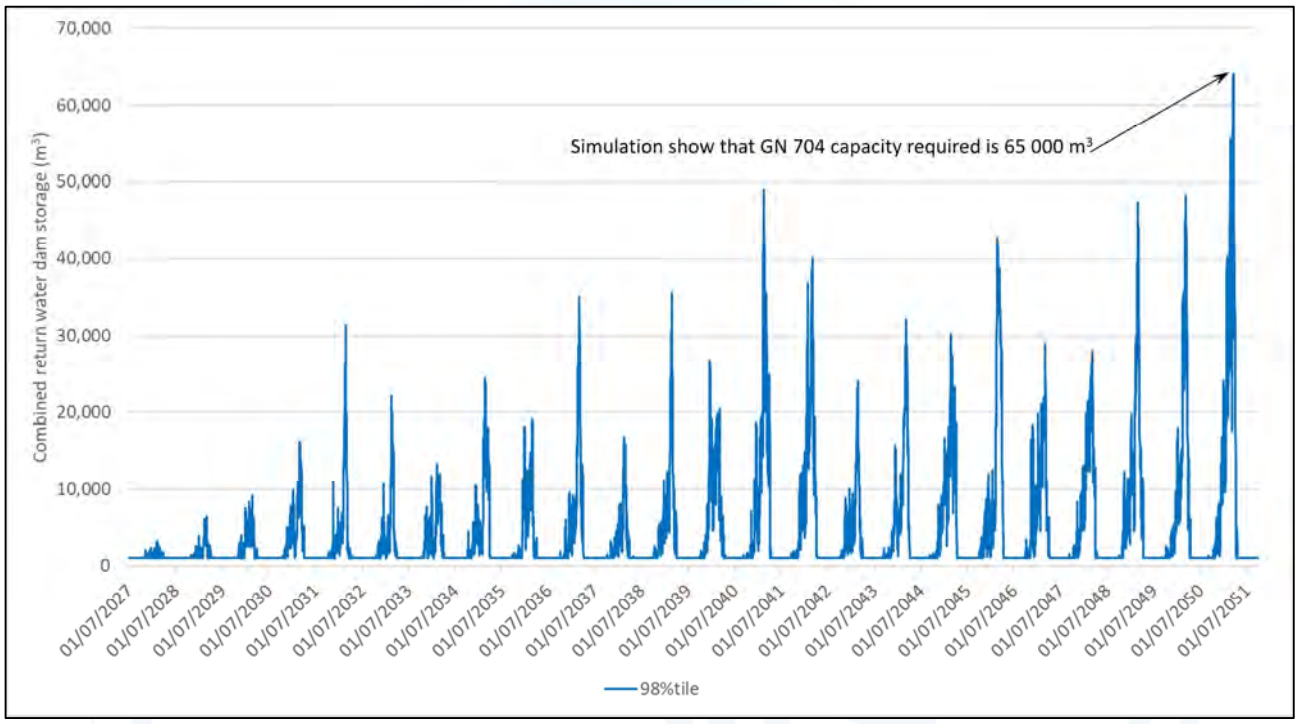


FIGURE 44: SIMULATED RETURN WATER DAM STORAGE

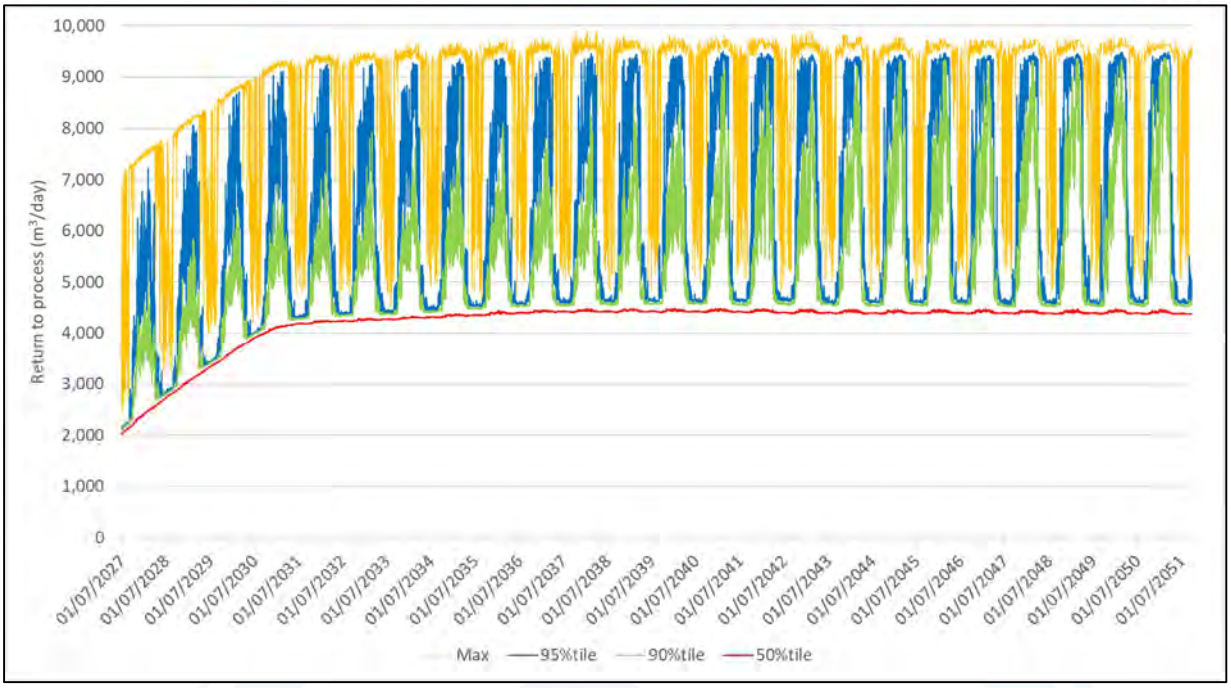


FIGURE 45: SIMULATED RETURN TO PROCESS FROM THE RETURN WATER DAM

6.6 Operational Water balance and returns

The average monthly and annual returns for the TSF at end of life are shown in Figure 46. The water balance diagrams for the TSF complex is provided in Appendix A.

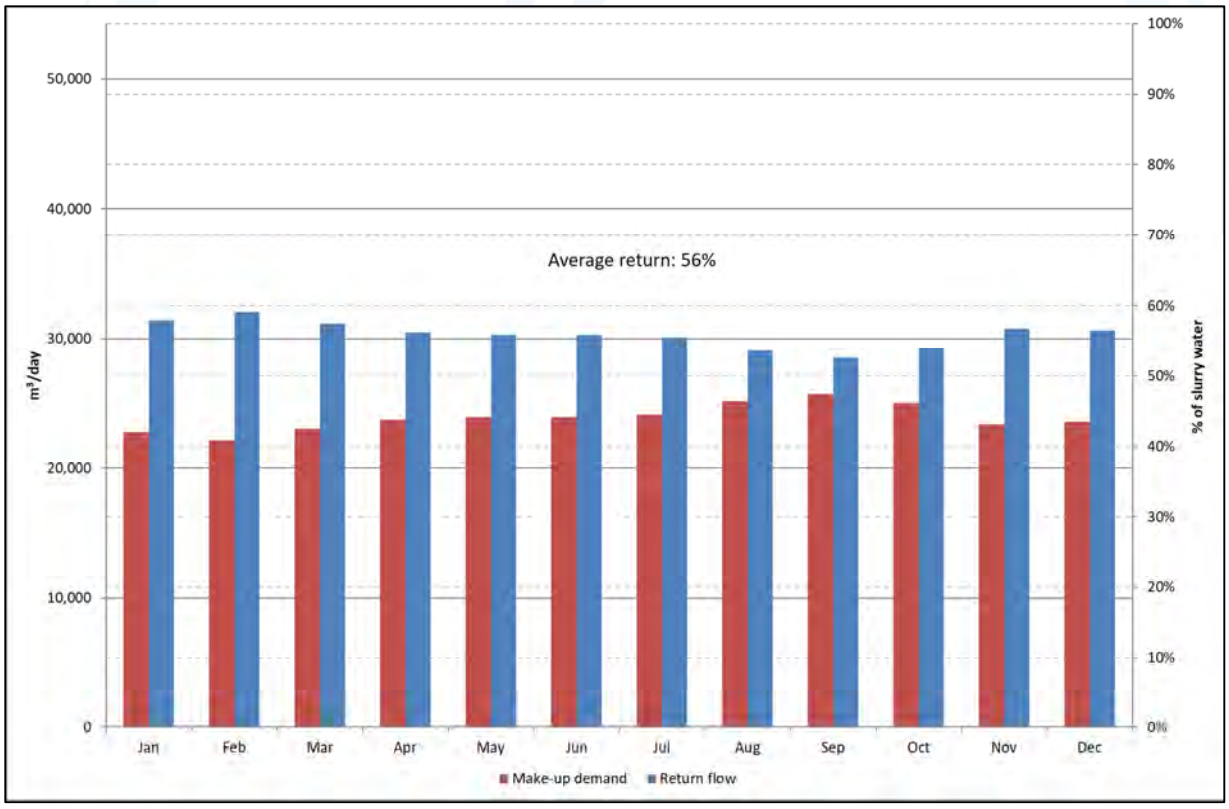


FIGURE 46: AVERAGE MONTHLY AND ANNUAL RETURNS

7. CLOSURE

7.1 Closure Concept

The recommended closure concept is to paddock the top surface, while treating drain flows. The drain flow water can be treated to discharge quality and released into the receiving environment. Alternatively, this water can be treated to higher water quality standards and sold for domestic or industrial consumption. 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.

7.2 Modelling

The closure concept requires a long-term water balance to determine the likely outcomes of the concept. The GoldSim water balance was run for 500 years to determine whether the paddocks overtop after closure.

7.2.1 Modelling results

The paddocks should have 1 m high radial walls at 85 m centres, with cross walls every 100 m. The maximum simulated storage depth during the 500-year simulation was 0.6 m. The concept is therefore hydrologically sustainable.

Drain flows are variable and it is recommended that one compartment of the return water dam be used as a buffer dam for drain flows. This will allow for additional operational flexibility for the treatment plant. Water is pumped from this buffer dam to the treatment plant.

The simulation results show that average drain flows are significantly lower post closure than the simulated drain flows during operations. This is expected because the basin will be dry for long periods of time. The paddocked solution also significantly increases evaporation potential by spreading the pool over a very large area. This average increased evaporation potential exceeds the average increased potential for infiltration.

This drain water is treated and removed from the water balance. The simulated drain flows (and therefore treatment volumes are shown in Figure 47. Side slope runoff is assumed to be discharged to the environment.

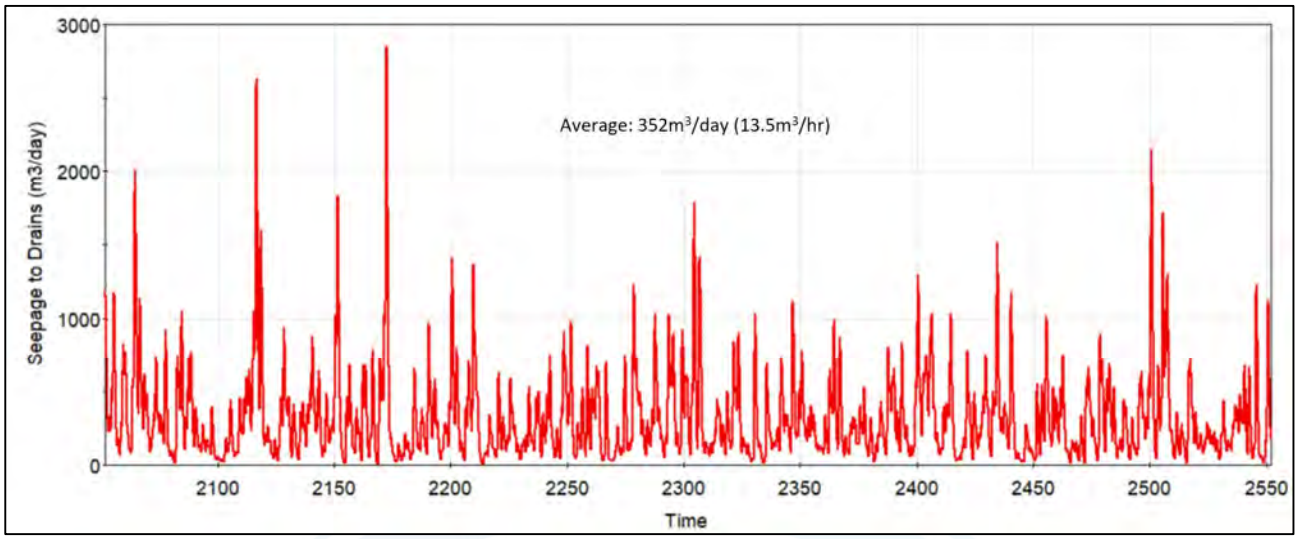


FIGURE 47: SIMULATED DRAIN FLOWS POST CLOSURE

8. CONCLUSIONS

The following conclusions are drawn from the work done.

- Dirty side slope storm water management on the TSF is achieved through chutes discharging into catchment paddocks, some of which decant into a collector pipe. This water is piped to the return water dam for recycling. The remainder is evaporated in the catchment paddocks.
- Drain flows are also collected in the same collector pipe.
- Once side slopes are rehabilitated, side slope storm water is managed as part of the dirty water system via chutes and the catchment paddocks to provide a conservative storm water management plan.
- A barge with a capacity of 54 000 m^3/day (3 000 m^3/hr @ 18 hrs/day) is sufficient to maintain pool control. This is approximately 100% of the slurry water requirements. This barge pumps back to the process.
- The return water dam must have a capacity of at least 65 000 m^3 to comply with GN 704. Additional capacity will provide operational flexibility and reduce the risk of discharge during high rainfall periods.
- Water must be returned to process at a rate of up to 9 800 m^3/day.
- The barge decant plus drain flow returns from the TSF complex is expected to be 56% of slurry water.
- Post closure modelling shows that an evaporative concept with a paddocked top surface, with drain flows being treated and released is hydrologically sustainable. There will be significant periods where the paddocks are dry so no long-term brine ponds will form.

9. REFERENCES

Middleton, B.J. and Bailey, A.K.., 2005, *Water Resources of South Africa, 2005 study (WR2005)*, 2009. WRC Report No TT 382/08.

Midgley, D.C., Pitman, W.V., Middleton, 1990, B.J. *Surface Water Resources of South Africa, 1990*. WRC Report No 298/2.1/94, Volume 2.

Johnson, K.A., Smithers, J.C., 2020, *Updating the Estimation of 1-day Probable Maximum Precipitation in South Africa*, Journal of Hydrology: Regional Studies 32.

Dyson, L.L., 2009, *Heavy Daily Rainfall Characteristics Over the Gauteng Province*, Department of Geography, Geomatics and Meteorology.

HRU, 1972, *Design Flood Determination in South Africa*, 1/72, Hydrological Research Institute, University of the Witwatersrand, Johannesburg, RSA.

World Meteorological Organisation, 2009, *Manual on Estimation of Probable Maximum Precipitation (PMP)*, WMO-No. 1045.

Adamson, P.T., 1981, *Southern African Storm Rainfall,* Department of Environment Affairs, Technical Report TR102, Pretoria.

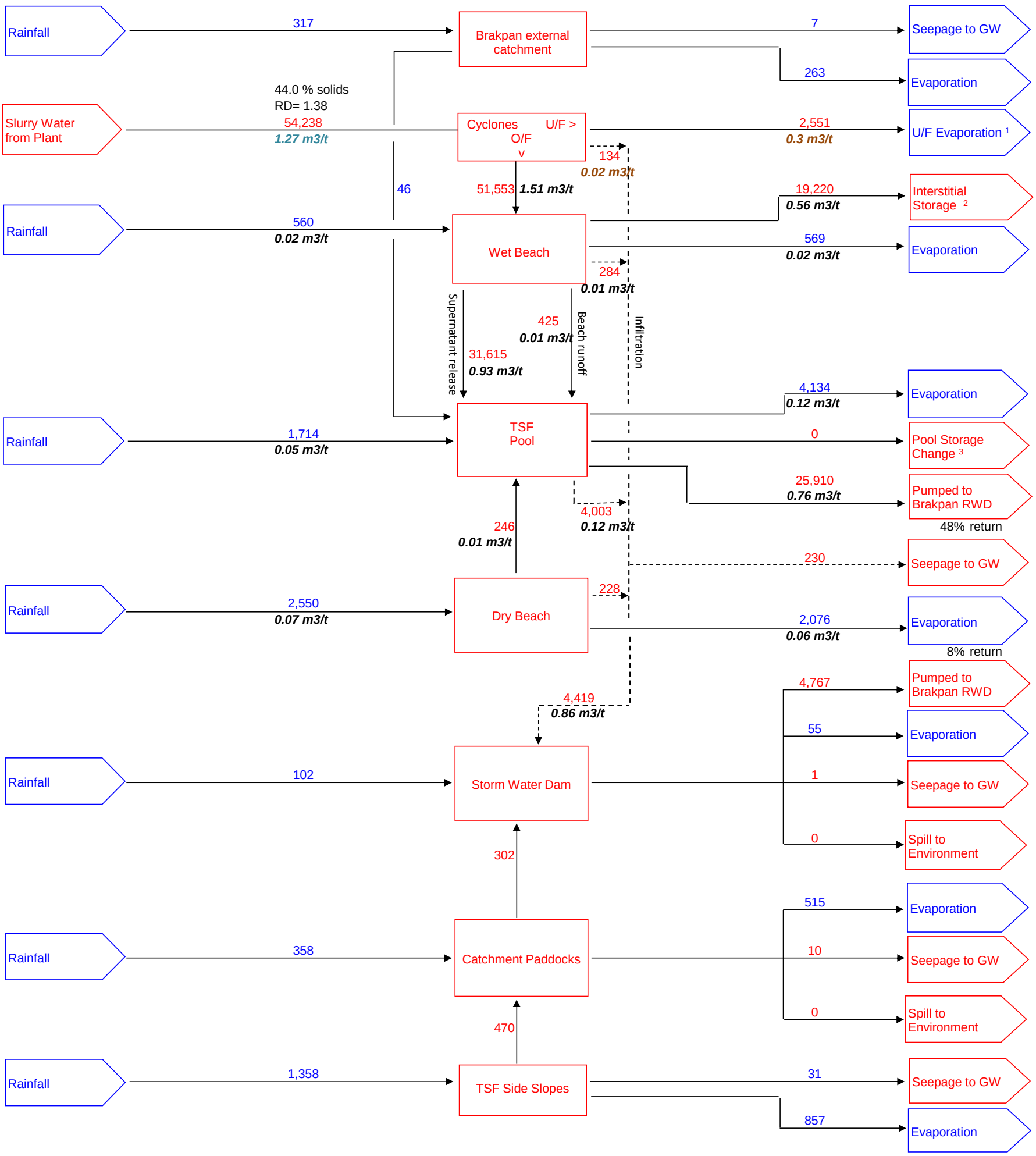
Highland Hydrology, 2016, *Hydrological Assessment of the Withok Tailings Complex Attenuation Dam*, Report No: Withok Hydro, September 2016.

Appendix A: Water Balance Diagram

Daily Average: m^3/day *(some flows expressed as m^3/tonne)*

Withok TSF
Water balance
EoL footprints

Rev 0
O/F RD=1.33
O/F 39.9% solids
U/F RD=1.9
U/F 76.1% solids
20% split



Prepared by

iLanda WATER SERVICES

Total Inflows
61,196

Total Outflows
61,196

Legend

000	Flows represented in m^3/OF tonne
000	Flows represented in m^3/total tonne
000	Flows represented in m^3/UF tonne
000	Dirty Flow (m^3/day)
000	Clean Flow (m^3/day)

Note 1: U/F initial losses are interstitial in nature, but are eventually lost to evaporation/dessication. Negligible long term interstitial storage is assumed.

Note 2: Water is initially trapped in the pore spaces on the wet beach. This water is lost to dessication in the long term

Note 3: Delta storage is the difference between the volumes at the start and end of the simulation. These need to be accounted for to ensure the inflows = outflows

General Note: These flows are rounded to zero decimal places for clarity. Consequently some flows may appear out of balance