

Appendix E9  
Presentations, Public Meeting 2020





**ENVIRONMENTAL AUTHORISATION AMENDMENT AND WASTE  
MANAGEMENT LICENSE FOR THE EXPANSION OF THE KAREERAND  
TAILINGS STORAGE FACILITY FOR MINE WASTE SOLUTIONS,  
NORTH-WEST PROVINCE**

Scoping Phase Public Meeting

05 February 2020

# AGENDA

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10:15 WELCOME, INTRODUCTIONS AND OBJECTIVES OF THE MEETING

10:30 PROJECT BACKGROUND AND MOTIVATION

*Mine Waste Solutions (MWS) - Duran Archery*

- Questions for clarification

11:00 OVERVIEW OF THE ENVIRONMENTAL AUTHORISATION PROCESS AND THE DRAFT SCOPING REPORT

*GCS - Sharon Meyer*

- Project description and legislative context (NEMA and NEM:WA)
- Public participation
- Terms of Reference for specialist studies
- Environmental Management Programme

11:30 QUESTIONS AND DISCUSSION

12:00 WAY FORWARD AND CLOSURE

# Welcome and Introductions

## Applicant:

## Mine Waste Solutions

Represented by:

- a) Conrad Freese - Project Manager
- b) John van Wyk - Senior Environmental Specialist
- c) Charl Human - Environmental Manager
- d) Duran Archery - General Manager
- e) Kgomotso Tshaka - Vice President Sustainability
- f) Setshedi Rasepae - Sustainability Officer

## Environmental Assessment Practitioner (EAP): GCS

Represented by:

- a) Sharon Meyer - Senior Environmental Consultant
- b) Lehlo Mashego - Environmental Consultant
- c) Anelle Lotter - Specialist Stakeholder Engagement Consultant

## Decision-makers:

### Competent Authorities

Department of Mineral Resources (DMR)  
Department of Human Settlements and Water and Sanitation (DWS)

### Commenting Authorities

National and provincial departments with jurisdiction in the area (e.g. DEA, DETECT, DARD)  
District and local municipalities (Dr Kenneth Kaunda DM, Matlosana and JB Marks LMs)

# Objectives of the meeting

The Draft Scoping Report serves as the basis for discussion and comment at the meeting. The report is available for public comment from 24 January to 24 February 2020

## The objectives of the meeting are to:

- Present to stakeholders an overview of the contents of the Draft Scoping Report.
- Obtain comments and inputs from stakeholders on further investigations that should be conducted.
- For stakeholders to raise comments which will be considered in the finalisation of the Scoping Report.

# Conduct of the meeting

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- Work through the facilitator
- Focus on issues relating to the proposed expansion of the Kareerand TSF
- Allow for equal participation
- Meeting is recorded
- Identify yourselves
- Practice cell phone etiquette
- Language considerations
- Questions at the end

# Project Background and Motivation

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MWS



## Draft Scoping Report for the Proposed Kareerand Tailings Storage Facility Expansion Project

Presenter: Sharon Meyer

05 February 2020



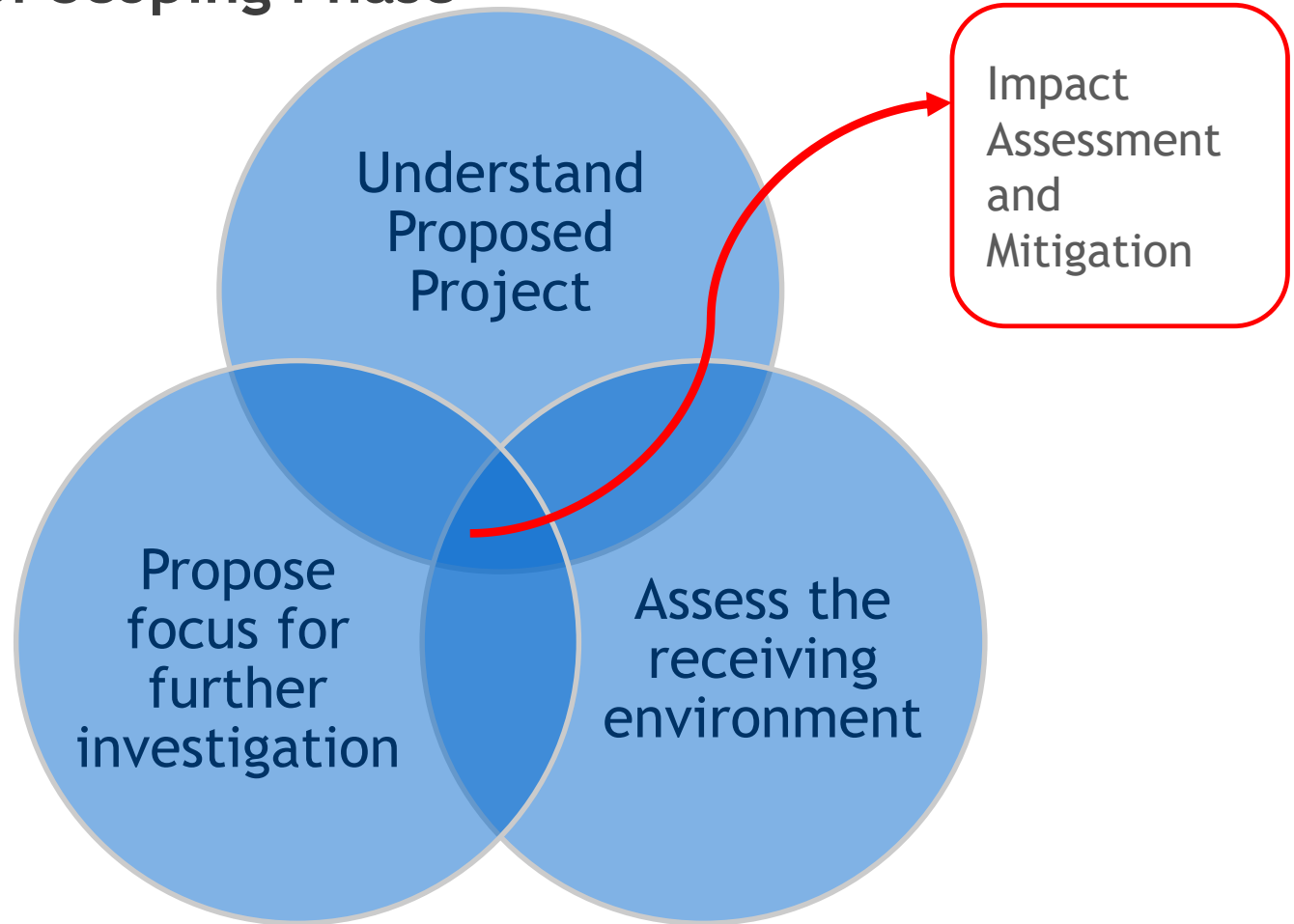
# Presentation Outline

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- **Scoping Process**
- **Project Description**
- **Relevant Legislation**
- **Baseline Environmental Assessment**
- **Identification of Potential Impacts**
- **Specialist Studies**
- **Legislated Process**
- **PPP Overview**
- **What Happens Now?**

# Scoping Phase

## Purposes of Scoping Phase



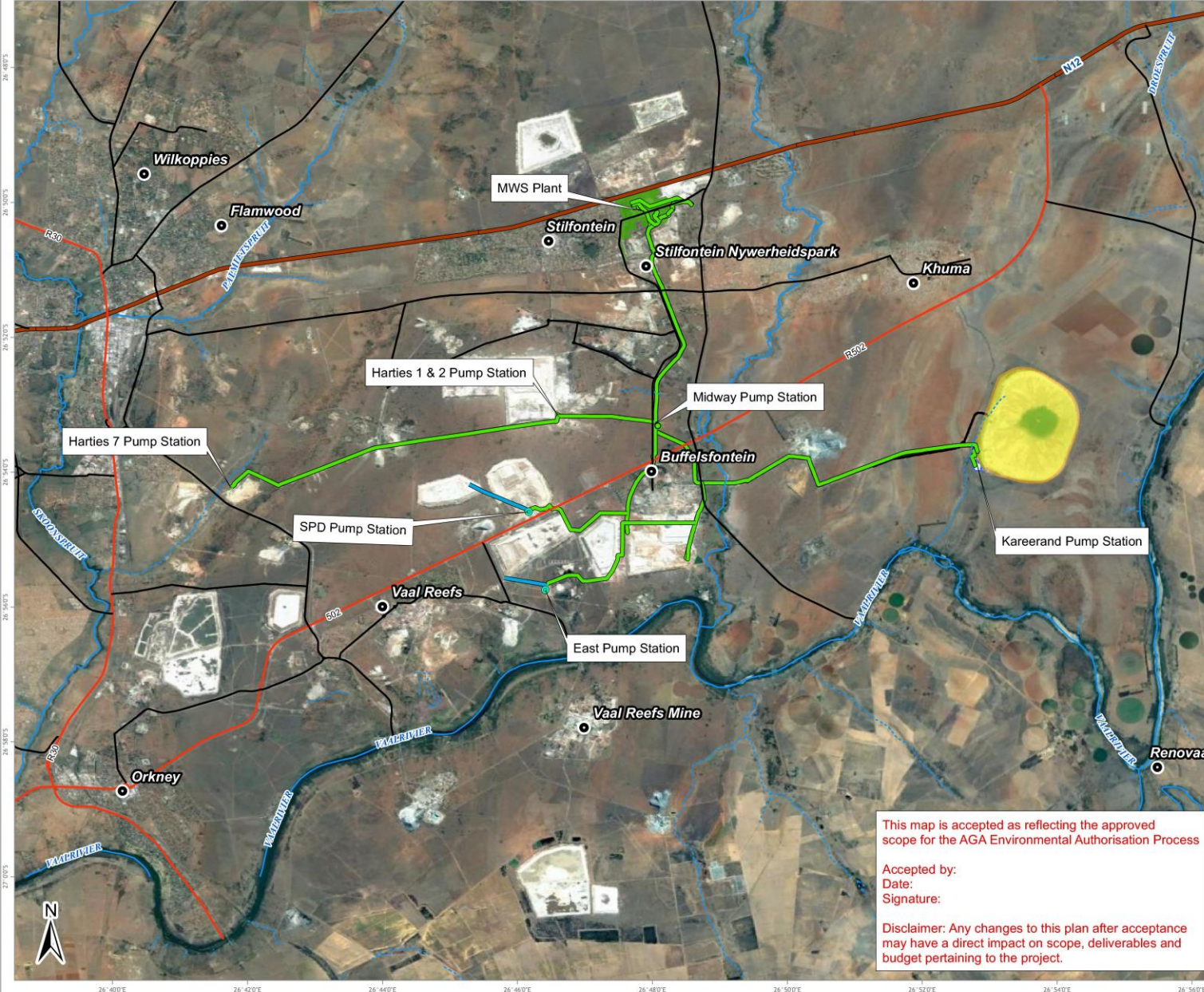
## Project Description

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- **TSF expansion footprint.**
- **Return Water Dams.**
- **Stormwater diversion channel.**
- **Reclamation pump stations.**
- **Process water and slurry pipelines.**

**Site Alternative Assessment and Feasibility Studies were carried out to identify the preferred site.**

# EXISTING INFRASTRUCTURE - OVERVIEW



- LEGEND**
- Towns / Settlements
  - Road Network**
    - National Route
    - Main Road
    - Secondary Road
  - Rivers and Streams**
    - Non-Perennial
    - Perennial
  - Existing Pipelines
  - Existing Access Road
  - Slurry Launder/Trenches
  - Existing Site Office
  - Existing Return Water Dam
  - Existing TSF Footprint
  - MWS Plant and Pump Stations



Data Sources:  
 Google Earth™ mapping service: 2018  
 Imagery Date: 10 September 2018  
 Infrastructure layout Revision F from Client 20180831



SCALE:	1:100 000
FIGURE NO.:	MAP NUMBER: 17-0026-55_V3
DRAWN BY: N RABOD GCS TECHNICIAN	REVIEWED BY: C BOTHA GCS SPECIALIST
DATUM: WGS84	DATE: 24 JUNE 2019
PROJECTION: GEOGRAPHIC	
PROJECT: KAREERAND NEW TSF ENVIRONMENTAL AUTHORISATIONS	
CLIENT: ANGLGOLD ASHANTI	

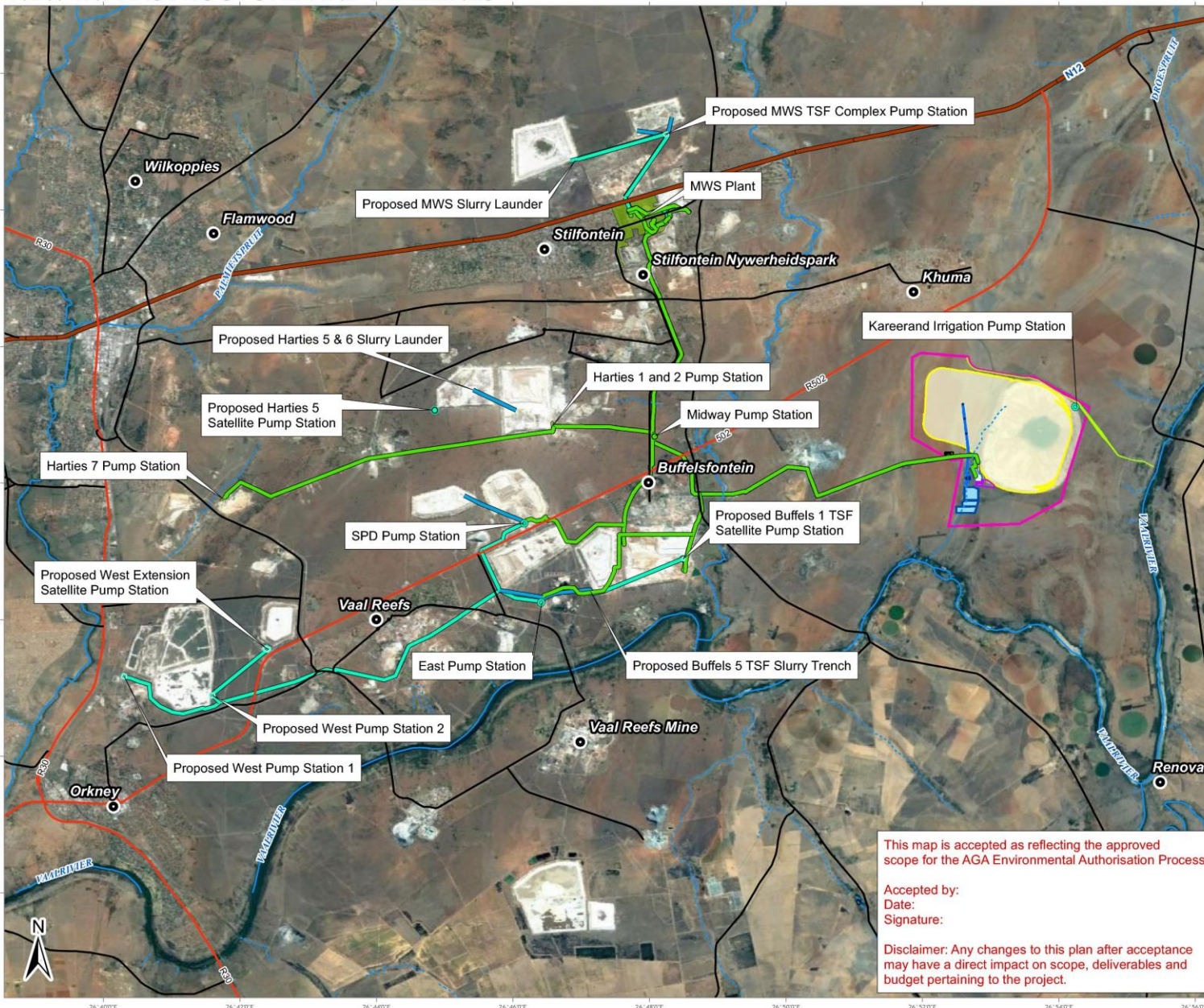
This map is accepted as reflecting the approved scope for the AGA Environmental Authorisation Process

Accepted by:  
 Date:  
 Signature:

Disclaimer: Any changes to this plan after acceptance may have a direct impact on scope, deliverables and budget pertaining to the project.

63 Wesel Road Woodhead  
 PO Box 2397 Bonaia 2128  
 South Africa  
 Tel: +27 (0) 11 803 5726  
 Fax: +27 (0) 11 803 5745  
 E-mail: info@gcs-sa.biz  
 www.gcs-sa.biz

# NEW INFRASTRUCTURE AND PIPELINES



### LEGEND

- Pump Stations
- Towns / Settlements
- Road Network**
  - National Route
  - Main Road
  - Secondary Road
- Rivers and Streams**
  - Non-Perennial
  - Perennial
- Pipelines**
  - Existing Pipelines
  - New Pipelines
- Slurry Launder/Trenches
- Decant System
- East SWD
- Existing Site Office
- Existing Return Water Dam
- Contractor's Yard
- Diversion Channel
- Return Water Dams
- TSF Footprint
- RWD Pump Station
- RWD Cutoff Trench
- MWS Plant and Pump Station
- New Infrastructure



Data Sources:  
 Google Earth™ mapping service: 2018  
 Imagery Date: 10 September 2016  
 Infrastructure layout Revision F from Client 20180831



FIGURE NO.:	MAP NUMBER: 17-0026-35-V18
DRAWN BY: N HAASD GIS TECHNICIAN	REVIEWED BY: C BOTHA GIS SPECIALIST
DATUM: WGS84 PROJECTION: GEOGRAPHIC	DATE: 24 JUNE 2019
PROJECT: KAREERAND NEW TSF ENVIRONMENTAL AUTHORISATIONS	CLIENT: ANLOGOLD ASHANTI

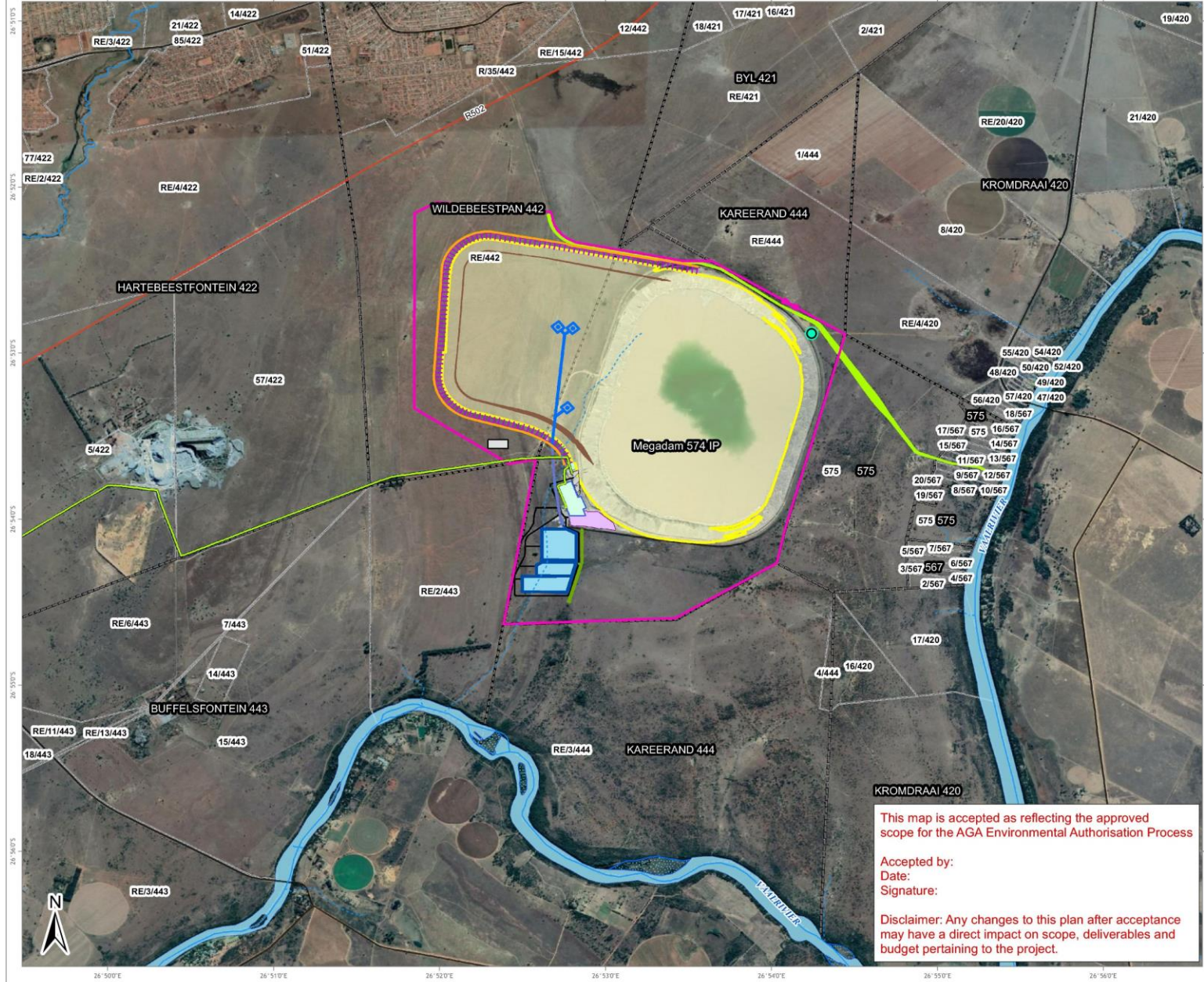
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63 Wesel Road Woodmead  
 PO Box 2997 Rivonia 2128  
 South Africa  
 Tel: +27 (0) 11 863 5726  
 Fax: +27 (0) 11 863 5745  
 E-mail: info@gcs.co.za  
 www.gcs.co.za

# KAREERAND TSF: PROPOSED SITE LAYOUT



- ### LEGEND
- Kareerand Irrigation Pump Station
  - Road Network**
    - Main Road
    - Secondary Road
  - Rivers and Streams**
    - Non-Perennial
    - Perennial
  - Existing Pipelines
  - Access Road
  - Decant System
  - Fenceline
  - Paddocks
  - RWD Soil Trench and Silt Trap
  - RWD Diversion
  - RWD Roads
  - Existing Site Office
  - Existing Return Water Dam
  - Contractor's Yard
  - Starter Wall
  - Stormwater Dam
  - Diversion Channel
  - Emergency Spillway
  - Return Water Dams
  - TSF Footprint
  - Parent Farms
  - Farm Portion



Data Sources:  
 Google Earth - mapping service: 2019  
 Imagery Date: 25/05/2018

0 0.25 0.5 1 Kilometers  
 SCALE: 1:40 000

FIGURE NO.:		MAP NUMBER: 17-0026-29-V18
DRAWN BY:	N. HADDOD GIS TECHNICIAN	REVIEWED BY: C. BOTHA GIS SPECIALIST
DATUM:	WGS84	DATE: 24 JUNE 2019
PROJECTION:	GEOGRAPHIC	
PROJECT:	KAREERAND NEW TSF ENVIRONMENTAL AUTHORISATIONS	
CLIENT:	ANGLOGOLD ASHANTI	

63 Wesel Road Woodhead  
 PO Box 2997 Rivonia 2128  
 South Africa  
 Tel: +27 (0) 11 883 5326  
 Fax: +27 (0) 11 883 5345  
 E-mail: info@gcs-sa.biz  
 www.gcs-sa.biz

This map is accepted as reflecting the approved scope for the AGA Environmental Authorisation Process

Accepted by:  
 Date:  
 Signature:

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# Legislative Context

## NEMA

Listing Notice	Activity
LN 1 Activity 12	RWD totally 60.6 ha will occur over watercourse.
LN 1 Activity 19	TSF expansion will impact on the watercourse to north and east.
LN 1 Activity 24	Access Roads to be constructed at about 8m wide.
LN1 Activity 28	Industrial development of 480 ha in total.
LN 1 Activity 31	Existing pump stations and associated infrastructure to be decommissioned in future.
LN1 Activity 46	Pipelines from 0.5, to 0.5m in diameter.
LN 1 Activity 48	The expansion of the TSF.

# Legislative Context

## NEMA

Listing Notice	Activity
LN 2 Activity 15	Development of 480 ha.



# Legislative Context

## NEMWA

Category	Activity
Cat B Activity 3	Recovery of tailings for reprocessing.
Cat B Activity 7	Disposal of tailings to land at the TSF expansion
Cat B Activity 9	Construction of expanded tailings storage facility - TSF

# Baseline Environment

## Receiving Environment



# Potential Impacts

Sensitivities	Assessments
Loss of floral species and habitats	Biodiversity and Wetlands Assessment
Impact to local wetlands and surface water bodies	Wetland Assessment
	Surface Water Assessment
Disturbance to soil profiles and soil potential	Soil and Land Capability Assessment
Soil Pollution and compaction	
Loss of arable land	
Dust generation	Air Quality Assessment
	Social Impact Assessment
	Radiation Public Safety Assessment
Pollution to Groundwater	Groundwater Assessment and Modelling
	Radiation Public Safety Assessment
Erosion of soils and drainage lines	Air Quality Assessment
	Surface Water Assessment

# Potential Impacts

Sensitivities	Assessments
Effect on local communities	Socio-economic Assessment
	Noise Assessment
	Visual Assessment
	Air quality Assessment
	Radiation Public Safety Assessment
Change of land use and sense of place	Noise Assessment
	Land Use Rezoning
	Visual Assessment
	Social Impact Assessment
	Soils, and capability and Agricultural Potential Assessment
Effect on Cultural Heritage and Graves	Cultural Heritage and Archaeology
	Socio-Economic Assessment

# Specialist Studies

Specialist Study	Primary Objectives
Air Quality	Modelling of fugitive dust fall out.
Noise	Identifying receptors and modelling impacts.
Visual	Identify receptors and assess potential impact.
Cultural Heritage	Archaeological, paleontological and cultural heritage assessment.
Radiation Public Safety Assessment	Assessment of the radiological exposure.
Socio-Economic	Understanding local factors and concerns.
Biodiversity	Terrestrial, wetland and aquatic investigations.
Soil and Land Capability	Agricultural potential, soil characterization, post closure land capability.
Groundwater	Modelling of GW plume, including cumulative.
Surface Water	Identify and delineate surface water.

# Basic Terms of Reference

Assess sensitivity of receiving environment and receptors

Identify potential impacts generated by the proposed expansion.

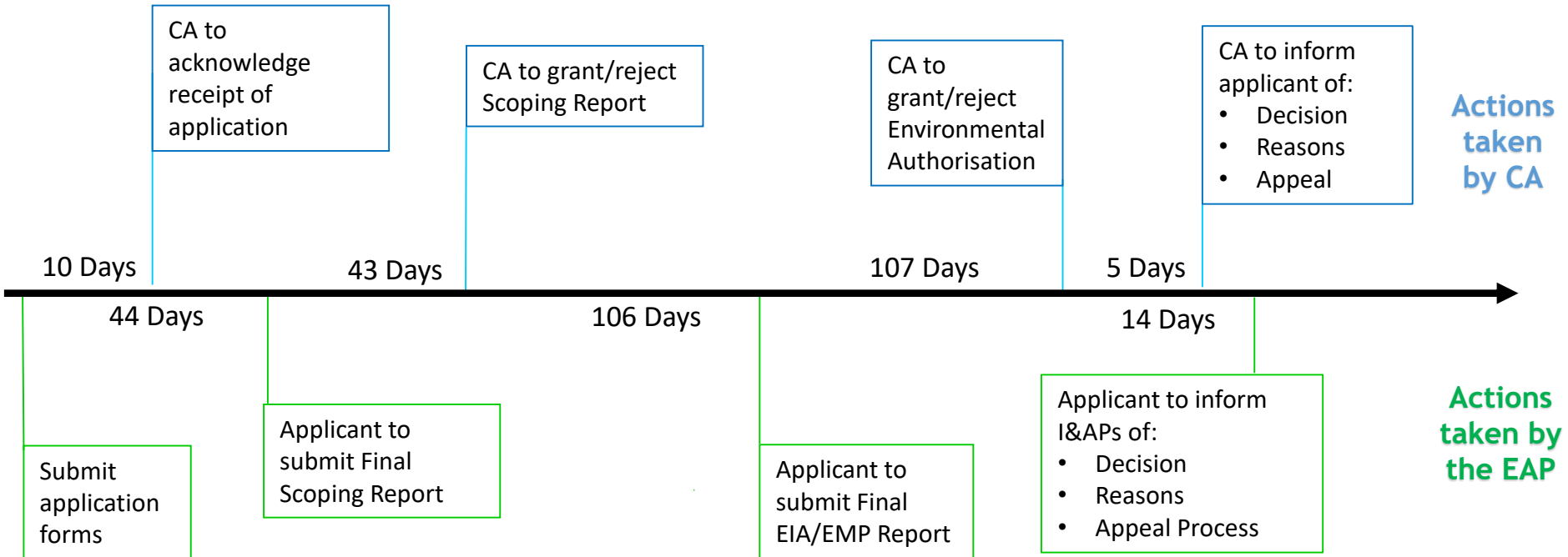
Rate the significance of the potential impact.

Provide practical mitigation action plan to avoid, mitigate and manage impacts.

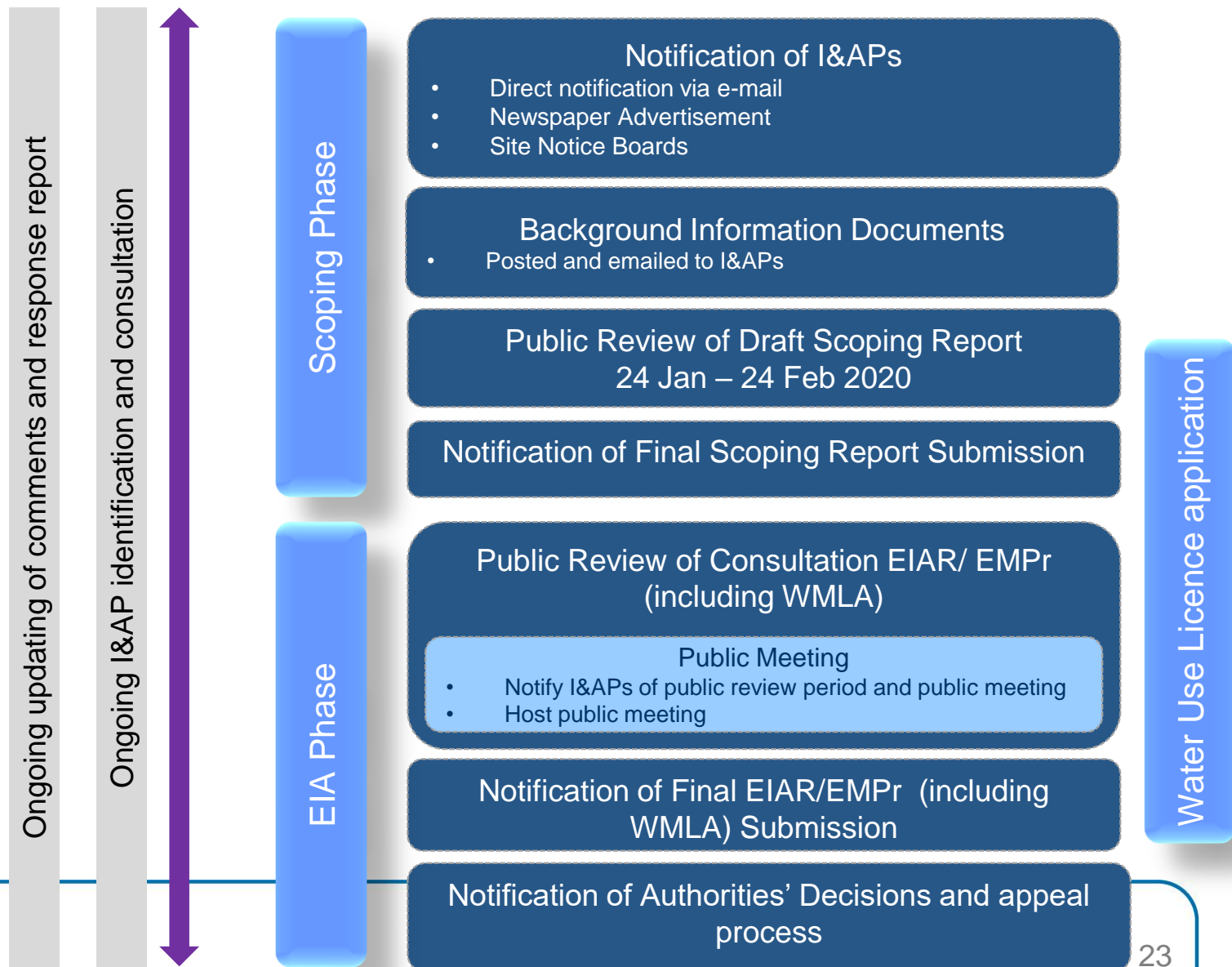
Assess residual impacts after mitigation.

Rate the cumulative impact expected to the environment after mitigation.

# S&EIR Process - 300 days (legislated)



# Public consultation - overview





# Public Participation: scoping phase

## Announcement of the integrated application process

- Advertisements (Appendix D to Report) were published as follows:

Klerksdorp Record (1 November 2019)

City Press (3 November 2019)

Potchefstroom Herald (31 October 2019)

- Background Information Document ("BID") (Appendix E to Report) was compiled and distributed as follows:

All I&APs on database via email on 1 November 2019 and as I&APs requested copies of the document in response to the advertisements published and the site notices placed

- Site notices placed on 1 November 2019

all around the Project Area on main roads and at public places. Appendix F to Report provides a description of the placement locations


- Telephonic notification to key I&APs and landowners
- GCS website (<http://www.gcs-sa.biz/documents/>)
- Comments and Responses Report (Appendix G to Report)



# Public Participation: Scoping Phase

## *Announcement of the availability of the Draft Scoping Report*

- Advertisements were published as follows:
  - [Klerksdorp Record \(23 January 2020\)](#)
  - [City Press \(26 January 2020\)](#)
  - [Potchefstroom Herald \(23 January 2020\)](#)
  - [Volksblad \(23 January 2020\)](#)
  - [Kroonnuus \(23 January 2020\)](#)
- Notification letter was compiled and distributed as follows:
  - [All I&APs on database via email on 20 January 2020](#)
- Telephonic notification to key I&APs and landowners
- GCS website (<http://www.gcs-sa.biz/documents/>)
- Update Comments and Responses Report
- Finalise Scoping Report and notify stakeholders of the availability of the Final Scoping Report



**SCOPING REPORT AVAILABLE FOR COMMENT  
ENVIRONMENTAL AUTHORISATION AMENDMENT  
AND WASTE MANAGEMENT LICENSE FOR THE  
EXPANSION OF THE KAREERAND TAILINGS STORAGE FACILITY FOR  
MINE WASTE SOLUTIONS, NORTH-WEST PROVINCE**

**GCS Ref. No: 17-0026**

Mine Waste Solutions (MWS), also known as Chemwes (Pty) Ltd (Chemwes), reclaims and reprocesses gold mine tailings that were previously deposited on tailings storage facilities (TSFs) in order to extract gold and uranium. The residue is then deposited on a single facility known as Kareerand TSF which is situated to the east of Klerksdorp (19 km from facility), within the jurisdiction of the City of Matlosana and JB Marks Local Municipalities in the Dr Kenneth Kaunda District Municipality in the North-West Province. MWS is lodging an integrated application for the expansion of the current Kareerand TSF to accommodate the increased tailings, six additional pump stations (three main and three satellite) and approximately 30 km of pipelines. The TSF expansion is proposed on the western edge of the current facility, and the final height of the combined facility (both expansion and current) will be 122m. The expansion will add approximately 380 hectares to the TSF footprint, including support infrastructure. Infrastructure that will be constructed as part of the TSF expansion includes fences, access roads, a topsoil bund wall, stormwater diversion channels, delivery pipelines, solution trenches, collector sump, catchment paddocks, starter wall, drainage system, decant system, catwalk, energy dissipater, silt trap, stormwater dam, return water dams (RWDs), contractors yard, RWD emergency spillway, pump stations, process water/slurry pipelines and slurry launders.

**INTEGRATED ENVIRONMENTAL AUTHORISATION PROCESS**

GCS (Pty) Ltd, as the independent environmental practitioner (EAP), has been appointed by MWS to conduct the integrated process of a Scoping and Environmental Impact Assessment (S&EIA) and Waste Management Licence (WML) Application. The following activities are applied for:

National Environmental Management Act (NEMA) (Act 107 of 1998):

- Listing Notice 1 of 2014 (GN R983 as amended) - Activity 12, 19, 24, 28, 31, 46, 48;
- Listing Notice 2 of 2014 (GN R984 as amended) - Activity 15; and

National Environmental Management: Waste Act (NEM: WA) (Act 59 of 2008):

- List of waste management activities that have, or are likely to have, a detrimental effect on the environment (GN 921, as amended) - Category B, Activity 3 and 7.

**YOUR PARTICIPATION IS IMPORTANT**

Interested and Affected Parties (I&APs) are invited to review the Draft Scoping Report for this project and provide comments or raise issues for consideration in the Final Scoping Report.

The Scoping Report will be available for comment between **24 January and 24 February 2020** at the following locations:

PRINTED COPIES	
Klerksdorp Public Library, Voortrekker Street, Klerksdorp Central (Tel: 018 487 8373)	
Orkney Public Library, Patmore Street, Orkney (Tel: 018 473 0310)	
Khuma Public Library, Ndondlosi Street, Khuma, (Tel: 018 487 8652)	
Potchefstroom Public Library, 25 Wolmarans Street, Potchefstroom, (Tel: 018 299 5051)	
Stilfontein Public Library, Somerset Drive, Stilfontein (Tel: 018 487 8291)	

ELECTRONIC COPIES	
Website download	<a href="http://www.gcs-sa.biz/documents/">http://www.gcs-sa.biz/documents/</a>
CD copy	On request to the public participation office
Hard copies and / or CDs	To all commenting authorities

Two public meetings will be held to give stakeholders the opportunity to raise issues with the Applicant and EAP. Meetings will be held as follows:

DATE AND TIME	VENUE
Wednesday, 5 February 2020 at 10:00	Lost Treasure, 1 Winnie Mandela Drive, Stilfontein
Wednesday, 5 February 2020 at 18:00	Lost Treasure, 1 Winnie Mandela Drive, Stilfontein

If you are interested in attending these meetings, please register as an I&AP with GCS.

To register or submit comments, please contact:  
GCS (Pty) Ltd: Anelle Lötter / Georgina Wilson, Tel: 011 803 5726, Fax: 011 803 5745, E-mail: [anelle@gcs-sa.biz](mailto:anelle@gcs-sa.biz) / [georgina@gcs-sa.biz](mailto:georgina@gcs-sa.biz) or Mail: P O Box 2597, Rivonia, 2128.

# What happens now?

Action	Expected Date
Submit Application Form	24 <sup>th</sup> January 2020
Draft Scoping Report for Public Comment	24 <sup>th</sup> Jan to 24 <sup>th</sup> February 2020
Submit Final Scoping Report to Authority	9 <sup>th</sup> March 2020
Authority Accept Scoping Report	22 <sup>nd</sup> April 2020
Draft EIA Report for Public Comment	1 <sup>st</sup> June to 6 <sup>th</sup> July 2020
Final EIA Report to Authority	3 <sup>rd</sup> August 2020
Decision from Authority	18 <sup>th</sup> November 2020
Authority Inform Applicant of Decision	23 <sup>rd</sup> November 2020
Notify Interested and Affected Parties of Decision	30 <sup>th</sup> November 2020

# Comments on the Draft Scoping Report

You can comment until 24 February 2020, by contacting:



**Sharon Meyer**

**Senior Environmental Consultant**

**(email) [sharonm@gcs-sa.biz](mailto:sharonm@gcs-sa.biz)**

**(office) 011 8035726**

**Anelle Lotter**

**Stakeholder Engagement Specialist**

**(email) [anellel@gcs-sa.biz](mailto:anellel@gcs-sa.biz)**

**(office) 011 8035726**



# MINE WASTE SOLUTIONS

PUBLIC PARTICIPATION PROCESS

FEBRUARY 2020



# OUR VALUES

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Our business values and beliefs guide our behaviour, in order that we make a positive impact. These behaviours and beliefs link our business activities to our social performance.



**Safety is our first value**



**We treat each other with dignity and respect**



**We value diversity**



**We are accountable for our actions and undertake to deliver on our commitments**

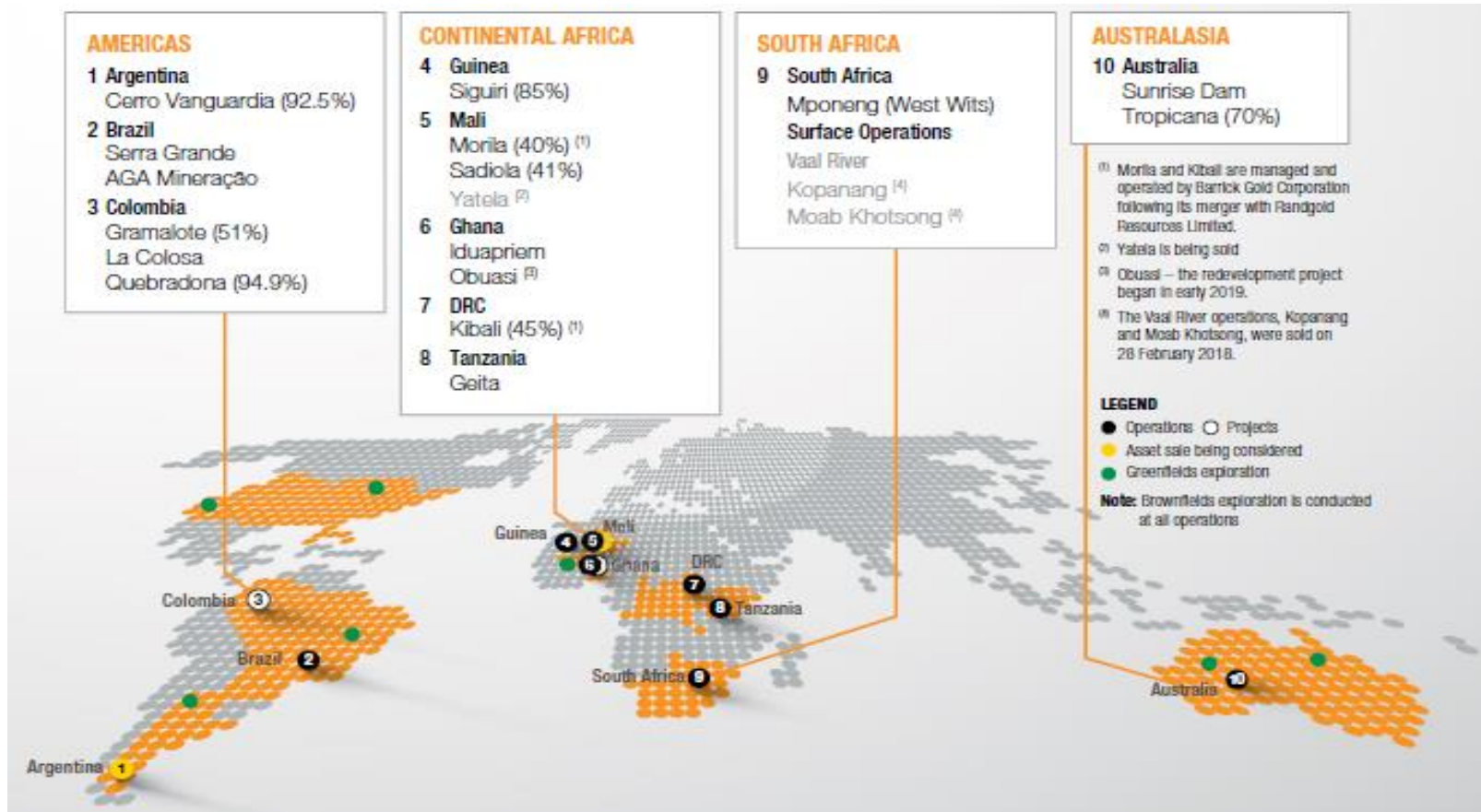


**The communities & societies in which we operate are better off with AngloGold Ashanti having been, & being, there**

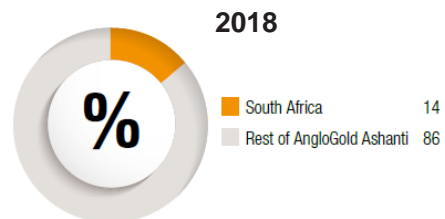


**We respect the environment**

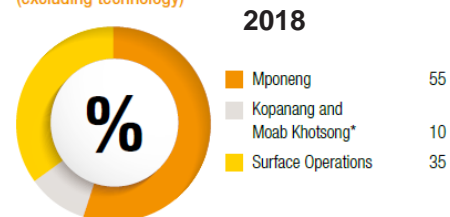
# ABOUT ANGGOLD ASHANTI – LEADING GLOBAL COMPANY



Contribution to group production

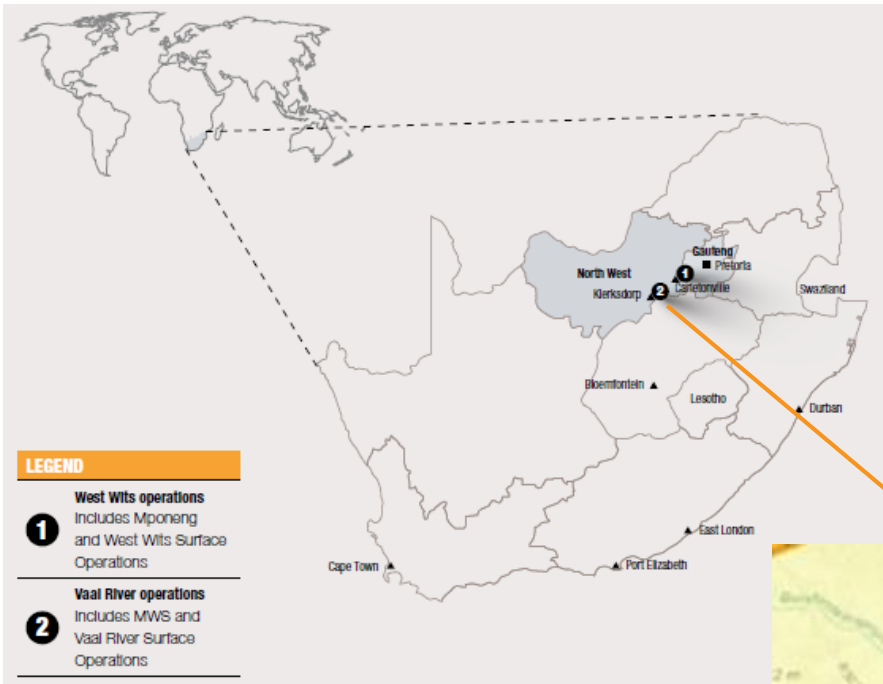


Contribution to regional production  
(excluding technology)



\* For the first two months of the year

# ABOUT MINE WASTE SOLUTIONS – LOCATION



- Located near the towns of Klerksdorp, Stilfontein and Khuma, 150km southwest of Johannesburg, in the North West Province
- Situated in the Dr Kenneth Kaunda District Municipality
- Situated on the border between 2 local municipalities, namely, City of Matlosana and JB Marks



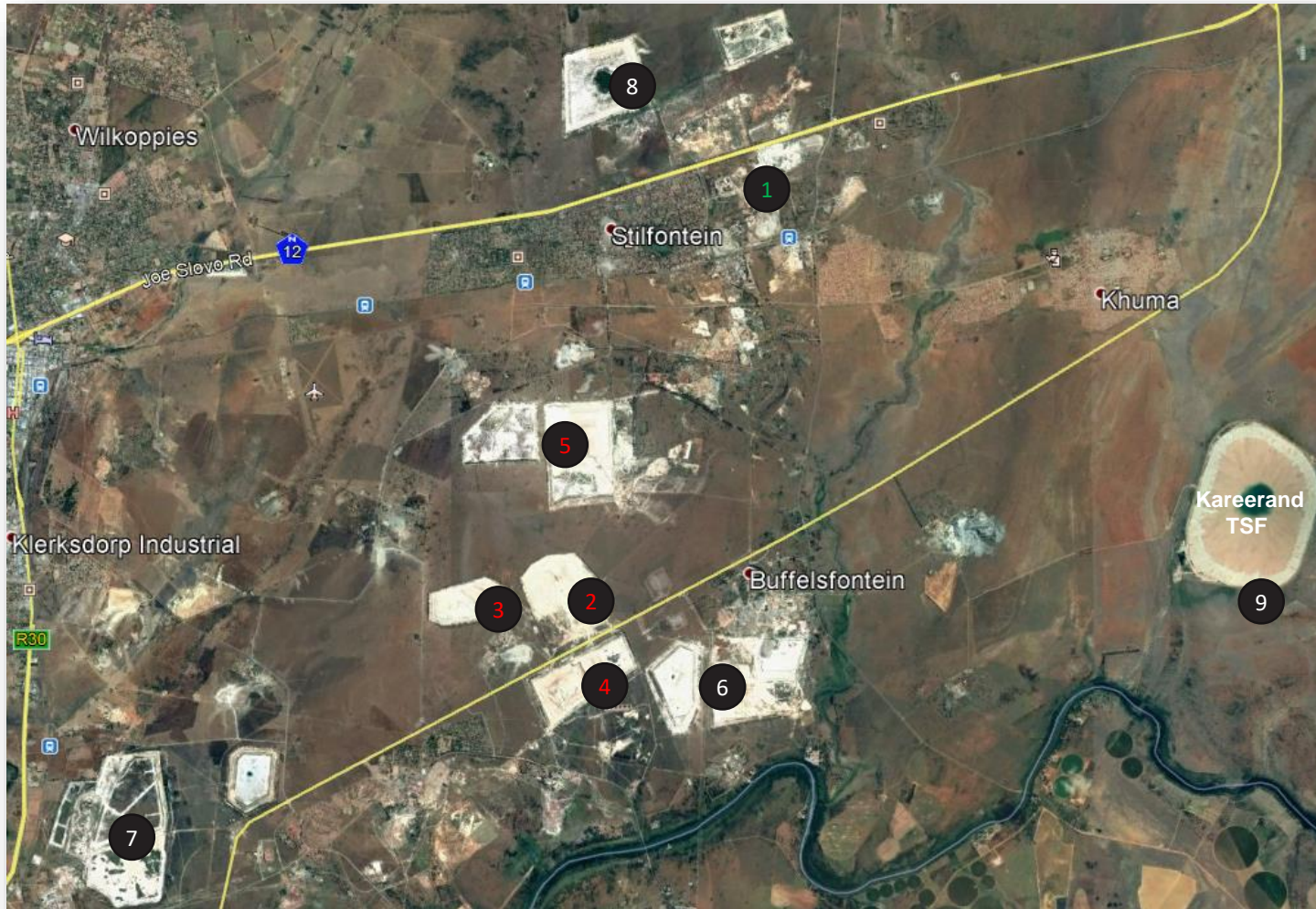


## ABOUT MINE WASTE SOLUTIONS

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- Mine Waste Solutions (MWS) was established in 1999 and is the holding company for Chemwes (Pty) Ltd.
- Mine Waste Solutions was acquired by AngloGold Ashanti on 20 July 2012, from First Uranium (Pty) Limited.
- The MWS operation is managed as a business unit within the AngloGold Ashanti South African Region.
- MWS is a gold tailings retreatment operation with a design life of 14 years to 2025.
- Multiple existing tailings storage facilities in the area are reclaimed and processed through three production modules.
- The throughput is approximately 2.5 million tons per month.
- The operation life is limited to 2025 due to the authorised capacity of the Kareerand tailings storage facility (TSF).
- The opportunity exists for the life of MWS to be extended to 2040 as additional waste tailings dumps are available to be reclaimed. To extend the life, MWS requires additional tailings deposition capacity.

# MINE WASTE SOLUTIONS OPERATING AREA



Legend	
1	MWS Plant
2	Sulphur Paydam
3	South East Dam
4	East Dam
5	Harties Complex
6	Buffels Complex
7	West Complex
8	MWS Complex
9	Kareerand TSF

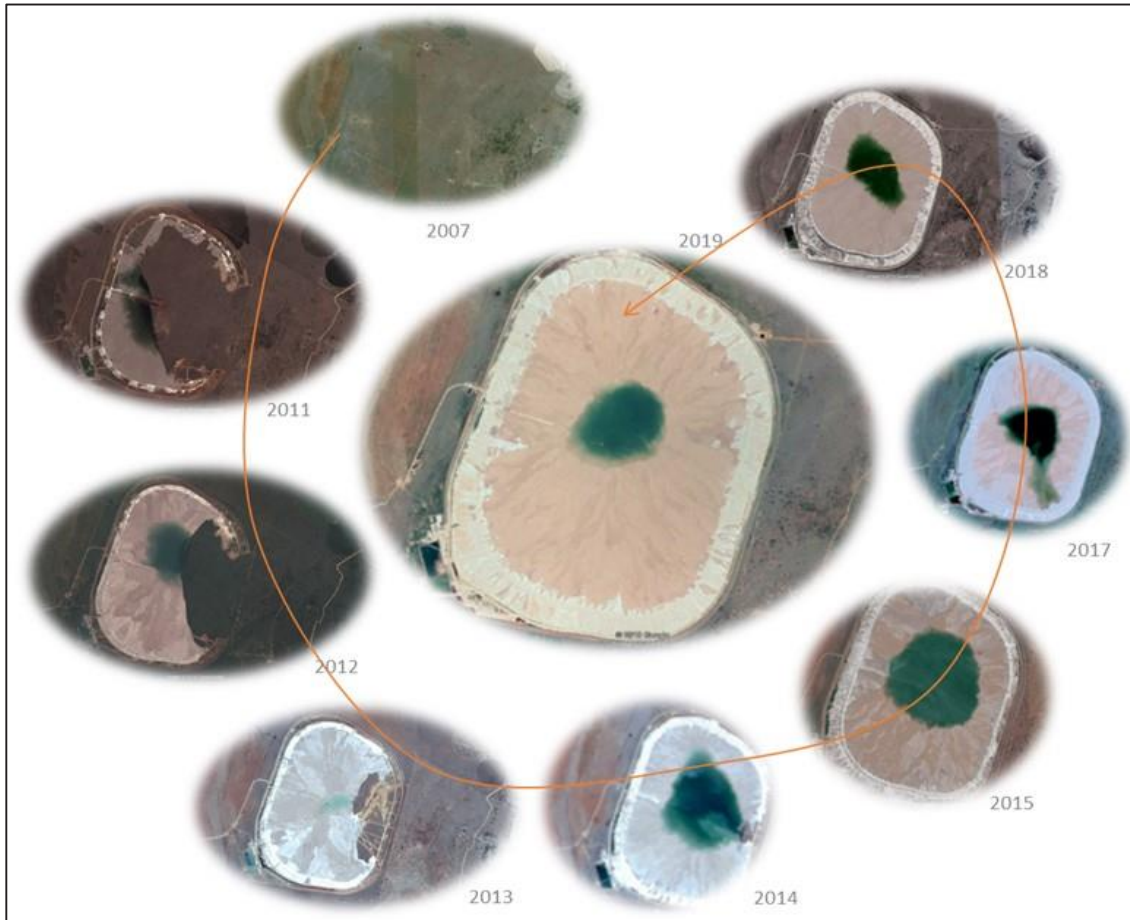
# MINE WASTE SOLUTIONS PROCESSING PLANT



## Legend

- ① – Main Offices
- ② – Stream 1
- ③ – Stream 2 & 3

# MINE WASTE SOLUTIONS TAILING STORAGE FACILITY



- The Kareerand Tailings Storage Facility was established in 2011 with a storage capacity of 352 million tons, at a height of 80m on a footprint of 530 Ha.
- At the highest point, the TSF is currently approximately 50 metres. At planned production volumes the TSF will reach the authorised height of 80 metres in 2025.
- To extend the life of the operation, a new TSF must be established.



# MINE WASTE SOLUTIONS BUSINESS

- The values and business principles of AngloGold Ashanti are equally applicable to Mine Waste Solutions as to the rest of the company.
- The AngloGold Ashanti policies and standards are therefore diligently applied at the MWS operations.
- The operation is ISO 14001:2015 certified which demonstrates our commitment to Environmental Management.
- MWS achieved OHSAS 18001 certification in 2018 which demonstrates our commitment to our employee's health and safety.
- AngloGold Ashanti subscribes to the International Council on Mining and Metals principles (ICMM)
- The MWS license to operate is covered by various environmental authorisations, to which we comply.
- Note: In terms of the current legislation, the Mineral and Petroleum Resources Development Act No. 28 of 2002 (the MPRDA), a mining right is not required to reclaim the TSFs.





## ENVIRONMENTAL COMPLIANCE

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- AngloGold Ashanti has a target of zero reportable environmental incidents and has made good progress within the context of continual improvement.
- Incidents still occur, and it is our objective to eliminate the consequence of the incidents by designing out the risk and upgrading installations and equipment.
- Mitigation measures implemented to prevent pollution and reoccurrence of environmental incidents include;
  - Increase stormwater containment – Kareerand & MWS Pollution Control Dam
  - Arresting groundwater plumes - Interception boreholes, phytoremediation
  - Establish and maintain secondary containment on pipeline routes (estimate 74 km)
  - Constructing infrastructure to separate clean / dirty water
  - Monitoring of dam levels and desilting programs – Maintain storage capacity
  - Contain water during rain-storm events on reclamations sites – Flapper valve controls
  - Adherence to the regulatory approved dust management plan
  - Rehabilitation of the tailings footprints once completely reworked – prevent loss of topsoil, erosion, and continued contamination of water resources





# ENVIRONMENTAL IMPROVEMENT PROJECTS - STORMWATER



Downstream containment – Koekemoer Spruit



Containment paddocks – TSF being reclaimed



Reclamation Site - Containment



Additional water containment dam - Kareerand

# ENVIRONMENTAL IMPROVEMENT PROJECTS – DUST MANAGEMENT



Water Canons – Dust Suppression



Tailings Dam Grassing



Physical barriers - Netting



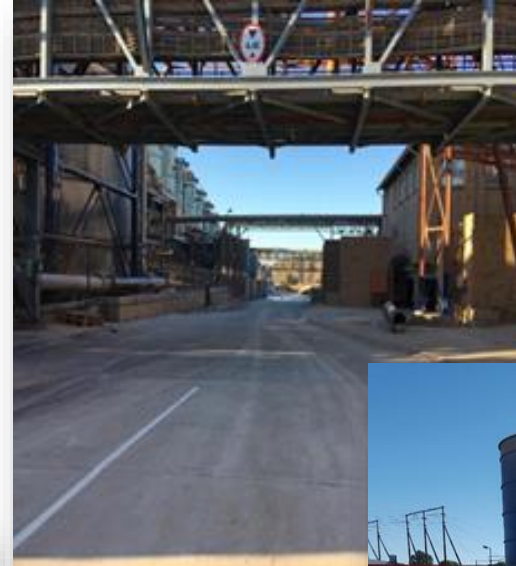
Netting & Grassing

# IMPROVEMENT AT MWS PLANT SINCE ACQUISITION

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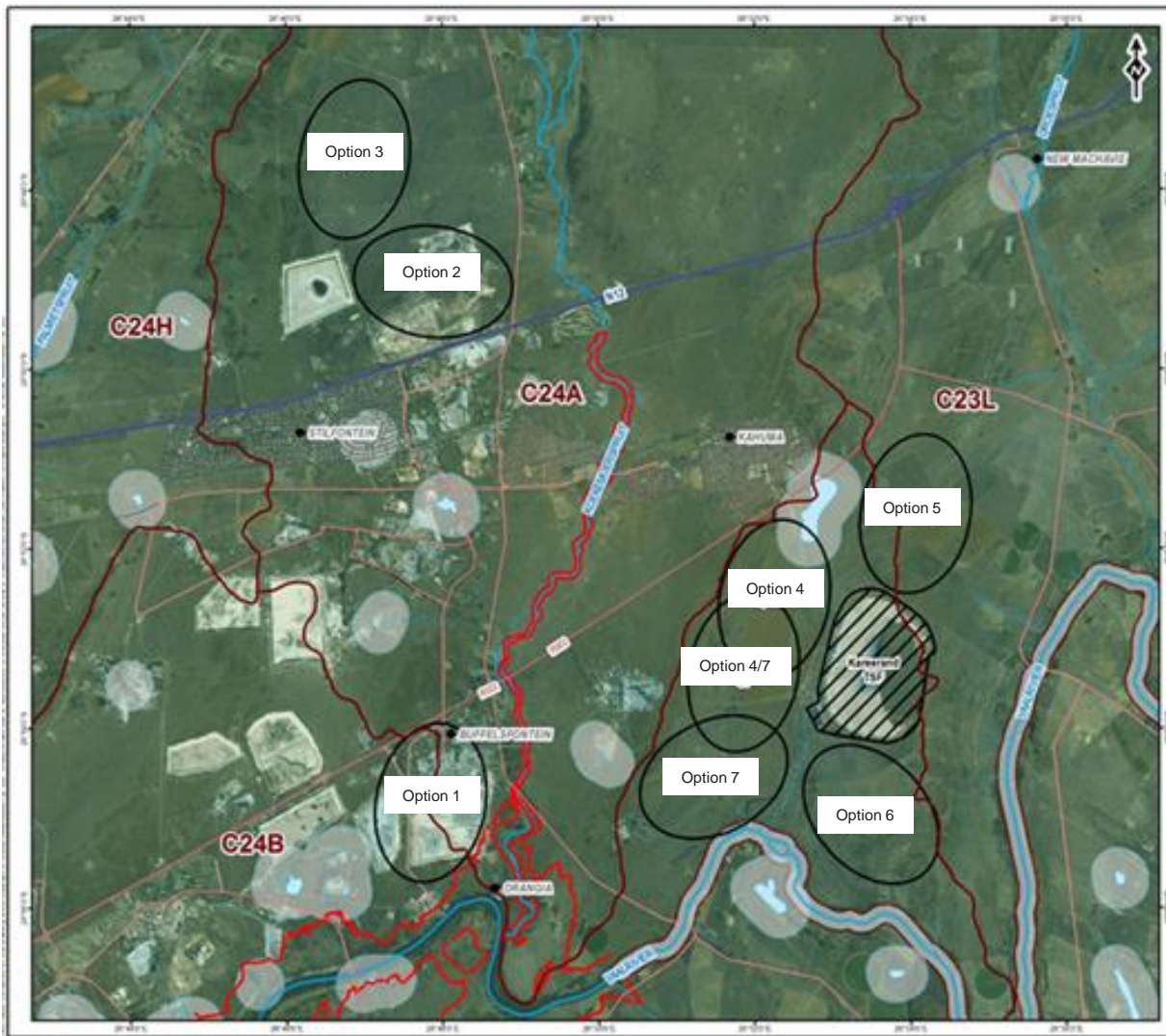
Plant condition 2013



Plant condition today



# NEW TSF SITE SELECTION PROCESS (TO BE PRESENTED IN THE EIA REPORT)



Evaluation criteria to rank sites (qualitative, knowledge & judgement)

- Presence of dolomites
- Greenfields/brownfields
- Footprint/capacity
- Engineering/technical
- Environmental/social
- Constructability/operability

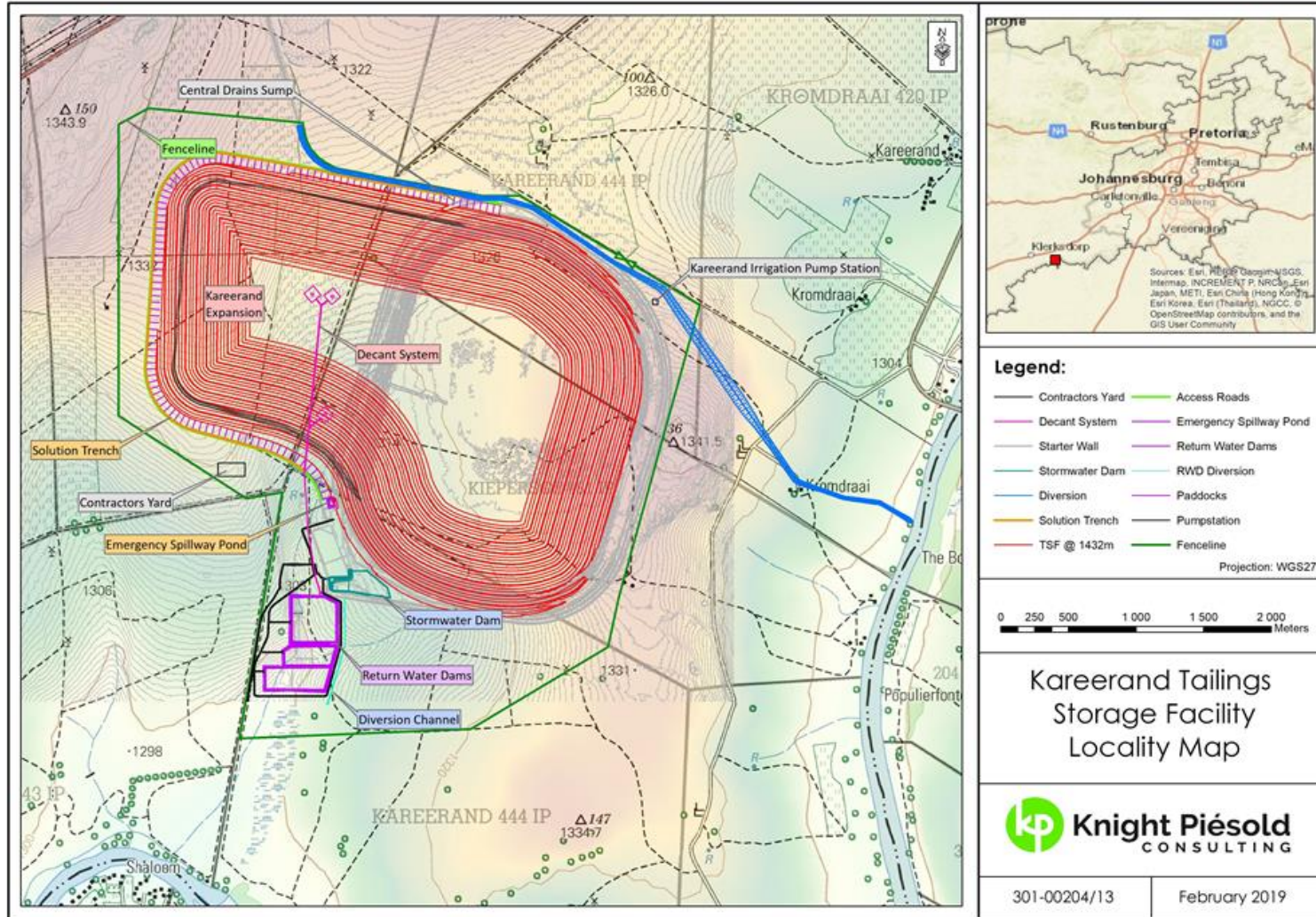
Option 4 & 5 most feasible

- Option 5 was eliminated due to land ownership
- Option 4/7 was identified

Option 4/7 progressed into the expansion of the TSF as the preferred site due to:

- No dolomites
- Smallest footprint
- Single site of impact
- Reuse of existing infrastructure

# POTENTIAL DESIGN OF THE TSF EXPANSION



## SUBCONTRACTORS AND LOCAL SUPPLIERS

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The major component of the project scope is earthworks and the construction period will span 4 years. It is anticipated that between 88 and 123 construction vehicles will be on site

- Major identified work packages include
  - HDPE Lining – Specialist supply and install
  - Solution trench concrete and catwalk – local subcontractors
  - Penstock pipeline – local contractor
  - Structural steel – local fabrication contractor
- Identified Material supply work packages
  - Sand and aggregates
  - Concrete
  - Geotextiles
  - Precast concrete pipes
  - Steel pipes
  - HDPE pipes

<b>Employment Category (full-time and part-time)</b>
Site Management
Supervisory staff
Technical staff
Operators
Skilled labour
General labour
Total

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Questions ?