

**Assmang (Pty) Ltd:  
Dwarsrivier Chrome Mine  
ENVIRONMENTAL IMPACT  
ASSESSMENT PROCESS  
DEVELOPMENT OF VARIOUS  
CAPITAL PROJECTS &  
PROPOSED KHULU TAILINGS  
STORAGE FACILITY, NEAR  
STEELPOORT, LIMPOPO  
PROVINCE**

**Background Information  
Document**

Notice of an Integrated Environmental Application in terms of The National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA) amendments of 2017 (Regulation 326 and Regulation 327), the National Environmental Management: Waste Act, 2008 (Act 59 of 2008) (NEM:WA), the National Heritage Resources Act (Act No. 25 of 1999) (NHRA), and the National Water Act, 1998 (Act No. 36 of 1998) (NWA).

<b>Notification Status:</b>	Final
<b>Applicant:</b>	Assore Ltd: Dwarsrivier Chrome Mine
<b>DMRE Reference:</b>	179EM
<b>EnviroGistics Ref.:</b>	<b>21828</b>
<b>Date of Publication:</b>	15 July 2021

**Purpose of this Background Information Document**

The purpose of this document is to:

- Provide all Interested and Affected Parties (I&APs) with information on the proposed Dwarsrivier Chrome Mine's Capital Projects and development of the Khulu Tailing Storage Facility (TSF) and various other Capital Projects,
- Introduce, explain and initiate the Public Participation Process that is prescribed by the National Environmental Management Act, 1998 (Act No.107 of 1998) (NEMA); National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) (NEM:WA), National Water Act, 1998 (Act No. 36 of 1998) (NWA); and the Mineral and Petroleum Resources Development Act, Act 28 of 2002 (MPRDA)

We invite all I&APs to:

- become involved in on the Public Participation Process to be followed;
- become involved in the Integrated Environmental Application and Water Use Licence Process;
- comment on the environmental (bio-physical) and socio-economic environment; and
- provide any other suggestions, issues/comments or recommendations.

## Introduction

Dwarsrivier Chrome Mine (DCM) has been mining chromite ore from the LG6 seam since 1999. Between 1999 and 2005, ore was mined using opencast methods. The six (6) opencast pits have subsequently been mined out and backfilled with the exception of the South and North Pit portals from which access is gained to the underground workings. The current mine plan extends the life of the operations to the year 2042.

### Project Size and Location

DCM is situated approximately 60km northwest of Lydenburg, 25km south of Steelpoort and 63km northeast of Roossenekal in the Limpopo Province. *Please see Figure 1 hereafter.* The mine currently holds the mining rights for Portion 1 (Remaining Extent) and Portion 0 (Remaining Extent) of the farm and surface rights for the said portions. Surface rights also extend onto Portion 4 (a portion of Portion 3) of the farm De Grootboom 373KT. The operation is in the Fetakgomo Tubatse Local Municipality, within the boundaries of the Sekhukhune District Municipality. The proposed new mining activities are located on the following Farms:

- ☛ Project 1 – Khulu Tailings Storage Facility TSF
  - Farm Dwarsrivier 372KT RE (TSF and ancillary infrastructure):
    - TSF Option B: 20ha (preferred)
    - TSF Option D: 21ha
  - Farm Dwarsrivier 372KT Remainder of Portion 1 (TSF and ancillary infrastructure):
    - TSF Option C: 28ha
    - TSF Option F: 17ha
  - Farm Dwarsrivier 372KT Portion 6 (location can still change to Dwarsrivier 372KT RE):
    - Proposed WRD for Option B: 1.7ha
- ☛ Project 2 – Diesel and Emulsion Batching
  - Farm Dwarsrivier 372KT Remainder of Portion 1: 4.6ha
    - Emulsion Batching: 1.6ha
    - Diesel Batching: 3ha (clearance of about 0.37ha)
    - Emulsion Batching Access Road: 80m at 6m width: 0.048ha (480m<sup>2</sup>) (clearance of about 480m<sup>2</sup>)
    - Diesel Batching Access Road: 55m at 6m width: 0.033ha (330m<sup>2</sup>) – no (no clearance, existing road will be used)
- ☛ Project 3 – Extension of Main Parking Area
  - Farm Dwarsrivier 372KT Remainder of Portion 1: 0.5ha
- ☛ Project 4 - Widening of Access Road between South Shaft/Main Offices and Plant
  - Mainly on Farm Dwarsrivier 372KT Remainder of Portion 1: 0.3ha
- ☛ Project 5: Access Crossing between Plant and North Mine
  - Farm Dwarsrivier 372KT RE: 0.2ha

### Project Description

Dwarsrivier Chrome Mine (DCM) will lodge an application for an Integrated Environmental Authorisation to undertake the following.

#### Project 1: Khulu TSF

DCM is currently depositing at the existing North Tailings Storage Facility (TSF) at the eastern side of their process plant on Portion RE of the Farm Dwarsrivier 372. It is anticipated that the existing North TSF will reach its full capacity within the next three (3) to five (5) years. The mine initially identified seven (7) potential new TSF establishment sites, which have since been narrowed down to three (3) potential TSF sites, namely Site Options B, C, and D. The extend of the potential sites are as follows:

- ☛ Site Option B: 20ha;
- ☛ Site Option C: 28ha; and
- ☛ Site Option D: 21ha.

The heights currently anticipated for each of the facilities will be 37m, 29m, and 49m respectively. The project will likely not involve typical tailings deposition techniques but rather involve the piping of tailings to a filter press facility from where the filter cake will be trucked to the new TSF. An operational period of around 20 years for the proposed new TSF is currently considered as part of the design. The TSF will also include a Return Water Dam (RWD) and all required ancillary infrastructure, such as pipelines, etc.

### **Project 2: Diesel and Emulsion Batching**

As the underground mining progresses in line with the approved Mining Works Programme, it is required that the surface infrastructure be adapted to suit the development of the mining operations. The mine therefore identified the need to erect two (2) batching areas, for diesel and emulsion batching, respectively, to supply diesel and emulsion to the underground mining operations. The location of the diesel and emulsion batching areas are to the north-east of the old Two Rivers Platinum Mine (TRP) Tailings Storage Facility, with the Diesel Batching area just south of the new TRP Tailings Pipeline and the Emulsion Batching area just north of the pipeline. The project will include:

- ☛ Diesel Batching Area:
  - Construction of an access road, approximately 55m in length and 6m in width, to the Diesel Batching area;
  - Due to the imposed limitations of the Mines Health and Safety Act, 29 of 1996 that limits the storage of hydrocarbons to 3 (Three) days of operation, the majority of the diesel, hydraulic oil and lube oil required will be stored at surface in a purpose designed and constructed terminal that provides the necessary life safety and environmental safety required. The project will involve the storage of two (2) horizontal, aboveground diesel tanks of 33m<sup>3</sup> each (as well as a possible future 22m<sup>3</sup> tank), a 40m<sup>3</sup> API self-bunded tank (Isotainer) for Hydraulic Oil and a 20m<sup>3</sup> API self-bunded tank for Lube Oil. A total combined storage of 148m<sup>3</sup>.
- ☛ Emulsion Batching Area:
  - Construction of an access road, approximately 80m in length and 6m in width, to the Emulsion Batching area;
  - No emulsion will be stored at the surface location and all product decanted will be stored underground at a purpose built depot located at Strike N15G / N17A. The surface location will be used for the express purpose of transferring emulsion from a designated road tanker, via the off-loading pipeline to the underground storage tanks.
  - The mine intends storing a total of 60 (Sixty) tons (similarly 60m<sup>3</sup>) of Emulsion product underground, with no surface storage being done and, no pipeline inventory.
- ☛ General:
  - Parking and offloading Area, with security offices at both areas (no dangerous good storage is planned to take place at any time);
  - Other internal roads will be required to access the various pipelines, these are however included into the overall clearance consideration of the project, and not as stand-alone roads.
  - The batching areas (diesel and emulsion) will feed into pipelines for underground use at both areas.

Clearance of indigenous vegetation will be required in the order of approximately 3ha (including Diesel and Emulsion Batching and the access road).

### **Project 3: Main Parking Extension**

The mine requires the expansion of the existing parking area at the Main Offices. The current parking area is about 0.8ha with the parking bays not sufficient to cater for the number of vehicles. The current parking bay comprises of a paved surface area and steel roof parking bays. The same principle will be applied at the proposed parking extension area. No new entrances will be required. The planned parking bay expansion will be located about 20m from the Springkaanspruit.

Clearance of indigenous vegetation will be required in the order of approximately 0.5ha.

### **Project 4: Widening of Access Road between South Shaft/Main Offices and Plant**

An existing road provides access between the Main Office Buildings and the Plant. The current width of the road ranges between 5-6m. The mine is planning on increasing a section of 700m of this road to a width of 16m to allow for two-way traffic. The purpose is to improve the safe operation of traffic on this road.

Clearance of indigenous vegetation will be required in the order of approximately 0.3ha.

**Project 5: Access Crossing between Plant and North Mine**

To ensure more optimal logistical management of traffic between the South Mine and the North Mine, and to reduce the number of vehicles on the regional road, the mine is planning on constructing a road under the regional road bridge to allow for access between the two areas.

Clearance of indigenous vegetation will be required in the order of approximately 0.2ha.

The following figure illustrates the combined project layout.

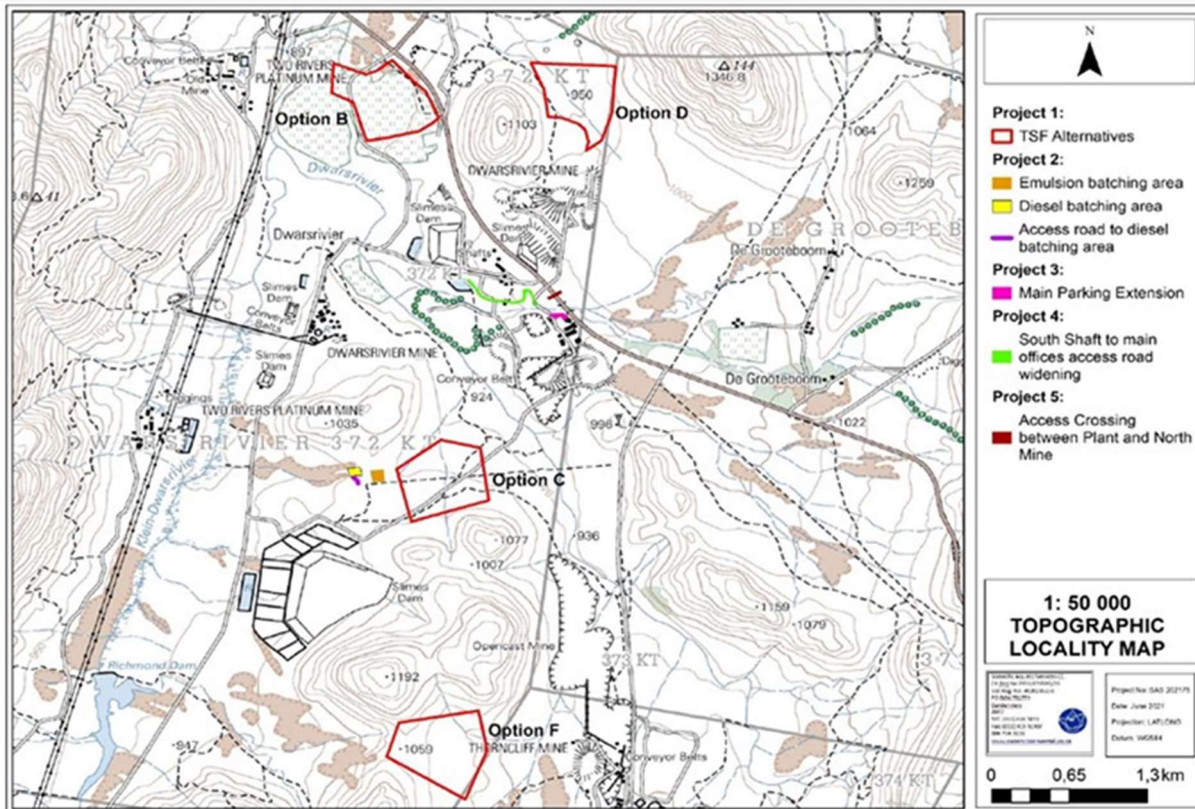


Figure 1: Khulu TSF and Other Capital Projects Overall Layout (note that Option F has been excluded due to various engineering constraints, including distance from the main plant infrastructure)

## Required Authorisations

### National Environmental Management Act, 1998

In terms of Section 24D and 29 of the National Environmental Management Act, Act 107 of 1998 (NEMA), as read with the EIA Regulations Process in terms of the NEMA Regulations 326 of 2017 (Regulation 324, Regulation 325 and Regulation 327) a Scoping and Environmental Impact Assessment Process is required. The following listed activities are triggered by the proposed development: NEMA:

- ☞ Government Notice 327, Listing Notice 1: Activity 10, 12, 13, 14, 19, 24, 27.
- ☞ Government Notice 325, Listing Notice 2: Activity 6, 15 and 16.
- ☞ Government Notice 324, Listing Notice 3: Activity, 4, 10, 12, 14 and 18.

The project also triggers activities listed in (GNR) 921 of the National Environmental Management: Waste Act, 2008 (Act 59 of 2008) (NEM:WA) (Category B: Activity 11) and will require a Waste Management License (WML). Regulatory Authority: Department of Mineral Resources (DMR), Limpopo Region (Polokwane office).

National Water Act, 1998 (NWA): National Water Act, 1998 (NWA): The following water uses will be licensed in terms of section 40 of the National Water Act, Act 36 of 1998.

- ☞ Section 21(c): Impeding or diverting the flow of water in a watercourse;
- ☞ Section 21 (i): Altering the bed, banks, course or characteristics of a watercourse; and
- ☞ Section (g) Disposing of waste in a manner which may detrimentally impact on a water resource.

Section 34 of the NHRA deals with structures that are older than 60 years. Section 35(4) of the NHRA deals with archaeology, palaeontology and meteorites. Section 36 of the NHRA, deal with human remains older than 60 years. Unidentified/ unknown graves are also handled as older than 60 years until proven otherwise.

According to Regulation 38 of the NHRA, any development or other activity which will change the character of a site exceeding 5 000m<sup>2</sup> in extent requires notification to the South African Heritage Resources Agency (SAHRA). This process, as well as the outcomes of the heritage and paleontological study will be undertaken as part of the Environmental Authorisation process.

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## Environmental Authorisation Process and Required Reporting

### **Project Manager and Environmental Assessment Practitioner: EnviroGistics (Pty) Ltd.**

EAP: Ms. Tanja Bekker

Qualification: MSc. Environmental Management (RAU, now Johannesburg University)

Professional Registrations: Registered with the Environmental Assessment Practitioners Association of South Africa (EAPASA; Reg No. 306/2019); SACNASP: Pr.Sci.Nat. Reg No. 400198/09

Experience: 19 Years

### **The Purpose of an Environmental Impact Assessment Report and Management Plan**

The National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA) provides for the identification of listed activities in terms of Section 24. These activities are promulgated under Regulation 326 and Regulation 327 (dated April 2017). The listed activities require an environmental authorisation, granted by the competent authority prior to commencement of these activities. The impacts of any listed activities must be investigated, assessed and reported to the competent authority before authorisation to commence with such listed activities can be granted. These activities depending on the Listing Notice triggered may require either a Basic Assessment Process (for Listing Notice 1 and 3) or a full Environmental Impact Assessment (for Listing Notice 2).

The said project will trigger activities listed under Listing Notice 1, 2 and 3, under the NEMA EIA Regulations, as well as as waste management activities under the NEMWA, which makes provision for an Integrated Environmental Impact Assessment Process. The NEMA prescribes the processes to be followed when compiling the Environmental Impact Assessment and the Environmental Management Plan (EMP), in respect of listed activities that forms the legal basis of this authorisation.

The purpose of an Integrated Environmental Assessment is to predict the potential impacts associated with any project. These impacts can be both positive and negative. The assessment has to determine the most suitable management measures to reduce adverse impacts, develop project solutions in consultation with all stakeholders and present the outcomes to the decision makers for consideration. The outcome of the assessment should define the Best Practical Environmental Option (BPEO), which is defined in the NEMA as “the option that provides the most benefit or causes the least damage to the environment as a whole, at a cost acceptable to society, in the long-term as well as in the short-term”.



## Public Participation Process or Stakeholder Consultation

### Purpose of Stakeholder Consultation

The purpose of the stakeholder consultation process is to:

- ☛ Engage with stakeholders as part of a process to identify the potential social and environmental impacts which may result from the planned activities.
- ☛ Develop an understanding of the views, concerns and expectations of stakeholders.
- ☛ Engage with stakeholders to determine the specific management requirements.

### Stakeholder Consultation Process

The key objective of public participation during an Integrated Environmental Authorisation process is to assist stakeholders to identify issues of concern and suggestions for enhanced benefits, and to comment on the findings of the EIA. The Public Participation Process is an integral part of the EIA process, and continues throughout the EIA process. For this purpose the process is presented in a systematic approach:

- ☛ **Step 1: Identification of Stakeholders and/or I&APs.** At this stage key stakeholders have been identified including:
  - Landowners and/or occupiers of affected land portions.
  - Landowners and/or occupiers located on land portions directly adjacent to the farms where the activities will take place.
  - Government bodies / organs of state that have jurisdiction over the area where the activities will take place.
  - Ward Councillors that represent the host communities in proximity to the site.
  - The Department of Rural Development and Land Reform (to confirm land claims and if applicable, land claimants will be registered as stakeholders).
  - Associations and non-governmental organisations that might have an interest in the area.
- ☛ **Step 2: Notification of Stakeholder and or I&APs of the proposed project,** via adverts, notices, BIDs to request these parties to register (please see the section on “How to register and get involved”).
- ☛ **Step 3: All stakeholders are afforded the opportunity to share their views, raise concerns and clarify their expectations** as it relates to the planned activities. Comments and concerns can be submitted in writing via email or fax to the details provided in this document. A written record of the stakeholder engagement process, the stakeholder comments and concerns will be compiled into a Report on Results of Consultation, and will be submitted to the DMRE for consideration. All registered stakeholders will be provided with written feedback to address any questions and concerns.
- ☛ **Step 4: I&APs are provided with the opportunity to review documents and comments on these.** I&APs will be provided with 30 days to comment on the draft reports.
- ☛ **Step 5: All registered stakeholders will be informed of the department’s decision regarding whether an environmental authorisation was granted or not.**

**Be an Integral Part of the Environmental Impact Assessment Process**

Public involvement is an essential part of any environmental assessment process. All comments will be recorded and presented to the project team and regulatory authorities. You will receive feedback on how your comments have been taken into account and the outcome of the assessment. You will further receive updates on the status of the project.

**How to Register and get involved?**

Parties wishing to register as Interested and Affected Parties (“I&APs”), who wish to participate by contributing comments, or require additional information, should please register or submit their correspondence in writing to BATHO EARTH Social and Environmental Consulting. Please refer to the Registration Form attached. All relevant comments will be incorporated into a draft and final Environmental Impact Assessment Report, which will be made available to all registered I&APs for review and comment.

**Project Timeframes and Opportunities for Involvement**

Action	Timeline	Comment
Register as a stakeholder	<b>From 15 July 2021 onwards</b>	Care has been taken to include various relevant I&AP groupings. Should there be other stakeholders you would like to be involved in the process, please send their details to the Public Participation Consultants
Review of Draft Scoping Report and Plan of Study.	<b>23 July 2021 – 23 August 2021</b>	All registered stakeholders will be afforded the opportunity to review and comment on the Draft Report.
Submit comments and concerns	<b>23 August 2021</b>	All comments and concerns submitted by this date will be accepted, responded to and included in the Public Participation Report that will form part of the Final Scoping Report
Submit all received comments to the DMRE.	<b>27 August 2021</b>	Submit Final Scoping Report to the DMRE
Review of Draft EIA Report and Environmental Management Plan	<b>Timeframes to be determined on completion of Scoping Phase</b>	All comments and concerns submitted by this date will be accepted, responded to and included in the Public Participation Report that will form part of the Final EIA Report
Submit all received comments to the DMRE.	<b>Timeframes to be determined on completion of Scoping Phase</b>	Incorporate all comment on the Final EIA Report for decision making



**Registration Form**

Name:		Surname:	
Title:		Initials:	
Organisation / interest:		Capacity (e.g. Chairperson):	
Postal / Residential address			
	Area:		Code:
Contact details	Tel:	(    )	
	Fax:	(    )	
	Mobile:	(    )	
	Email:		
Please mark with an X to indicate whether you would like to participate in the process:			Yes
			No
Preferred method of communication	Email		SMS
			Post
Date commented	( DD / MM / YYYY )		
<b>What is your main area of interest with regard to the proposed project?</b>			
<b>What are your points of concern or support for this project?</b>			
<b>Please indicate in which aspects you would require more information</b>			
<b>Please indicate the contact details of any I&amp;APs whom you think should be contacted</b>			
Name:		Surname:	
Tel:	(    )	Fax:	(    )
Mobile:	(    )	Email:	
<p>In order to be registered as an I&amp;AP for this project, fax, mail, or e-mail the completed registration form to</p> <p align="center"><b>BATHO EARTH:</b>  <b>Ms Ingrid Snyman or Ms Diana Verster</b>  <b>Postnet Private Suit 415, Private Bag x8, ELARDUSPARK, 0047</b>  <b>Mobile: 082 779 2750 (Ingrid) or 073 157 7362 (Diana)</b>  <b>E-mail: ingrid@bathoearth.co.za or diana@bathoearth.co.za</b></p> <p align="center"><b>Thank you for your participation.</b></p>			