mineral resources

Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

ENVIRONMENTAL IMPACT ASSESSMENT

AND

ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT

EVANDER GOLD MINES LIMITED:

DEVELOPMENT OF A WATER TREATMENT PLANT

PART B: ENVIRONMENTAL MANAGEMENT PROGRAMME

SUBMITTED FOR ENVIRONMENTAL AUTHORIZATIONS IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 AND THE NATIONAL ENVIRONMENTAL MANAGEMENT WASTE ACT, 2008 IN RESPECT OF LISTED ACTIVITIES THAT HAVE BEEN TRIGGERED BY APPLICATIONS IN TERMS OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT, 2002 (MPRDA) (AS AMENDED).

NAME OF APPLICANT: Evander Gold Mines Limited

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DMR REF NUMBERS: 30/5/1/2/3/2/1/(126)MR

PREPARED BY: EXM Advisory Services (Pty) Ltd

EXM ENVIRONMENTAL SCIENCE

Evander Gold Mines Limited

Part B: Environmental Management Programme Report

Development of a Water Treatment Plant

25 JANUARY 2022

DRAFT

DMR Ref: 30/5/1/2/3/2/1/(126) MR

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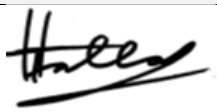
Report Sign-Off			
Name	**Designation**	**Signature**	**Date**
Trevor Hallatt	Registered EAP Pr.Sci.Nat.		2022-01-25
Divan van der Merwe	Director		2022-01-25

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ACRONYMS AND ABBREVIATIONS

Abbreviation	Explanation
BID	Background Information Document
CBA	Critical Biodiversity Area
DMR	Department of Mineral Resources
DWS	Department of Water and Sanitation
EAP	Environmental Assessment Practitioner
EIA	Environmental Impact Assessment
EIS	Ecological Importance and Sensitivity
EMC	Ecological Management Class
EMPr	Environmental Management Programme
ESA	Ecological Support Area
GHG	Greenhouse Gases
GNR	Government Notice
IAP	Interested and Affected Party
LOM	Life of Mine
Mtpa	Million tons per annum
LSA	Late Stone Age
mamsl	Metres above mean sea level
Mbs	Metres below surface
MPRDA	Mineral and Petroleum Resources Development Act
MSA	Middle Stone Age
NAAQS	South African National Ambient Air Quality Standards
NDCR	National Dust Control Regulations
NEMA	National Environmental Management Act
NEM: AQA	National Environmental Management Air Quality Act
NEM: BA	National Environmental Management Biodiversity Act
NEM: WA	National Environmental Management Waste Act
NFEPA	National Freshwater Ecosystem Priority Areas
NHRA	National Heritage Resources Act
PES	Present Ecological Status
PM10	Particulate matter less than 10 microns
PM2.5	Particulate matter less than 2.5 microns
ROM	Run of Mine
RWD	Return Water Dam
SACNASP	South African Council for Natural & Scientific Professionals
SAHRA	South African Heritage Resource Agency
SAMRAD	South African Mineral Resources Administration (System)
SDF	Spatial Development Framework
SLP	Social Labour Plan
TOPS	Threatened or Protected Species
WML	Waste Management Licence
WUL	Water Use Licence

1 DETAILS OF THE EAP

1.1 Details of EAP who prepared the report

Name of The Practitioner: Trevor Hallatt

Company: EXM Advisory Services (Pty) Ltd

SACNASP Registration nr: 300123/15

EAPASA Registration: 2019/1758

E-mail address: trevor@exm.co.za

TABLE 1-1: EXPERTISE OF THE EAP.

EAP	Qualification	Years' experience
Mr Trevor Hallatt	BSc Geography and Zoology (NWU) BA (hons) Environmental Management (NWU) MA Environmental Management (NWU)	>10 Years

1.2 Expertise of the EAP

Trevor obtained a B.Sc. degree from the North-West University (Potchefstroom campus) in Geography, Zoology and Tourism in 2010. This degree provided him with a sound base and understanding of the environment and human impacts on the environment. He also obtained an honours degree in Environmental Management at the NWU in 2011. Furthermore, Trevor obtained a Masters degree in Environmental Management (cum laude) in 2014.

Trevor Hallatt has more than 10 years of environmental management experience in mining, power generating, industrial and local government sectors. His duties entail the planning and execution of projects related to environmental management, including ISO 14001: 2004 and legal compliance audits, Environmental Impact Assessments (EIA), Compilation of Environmental Management Programmes, Environmental Risk Assessments and Environmental Management Systems. Furthermore, he performed different functions in the planning and delivery of environmental short courses, including the development of modules and presenting on different topics. Trevor is also a registered Natural Science Professional with the South African Council for Natural Scientific Professions (Reg nr: 300123/15).

Declaration of Independence

The undersigned declare that this report represents an independent and objective assessment of the risks associated with the proposed development. Curriculum vitae and proof of registration of the EAP is provided in Appendix A.

Evander Gold Mine Limited
Development of a Water Treatment Plant
Draft Environmental Management Programme
1
EXM Advisory Services

Name	Affiliation	Designation	Signature	Date
Trevor Hallatt	EXM Advisory Services (Pty) Ltd	EAP Pr.Sci.Nat.		2022/01/25

2 DESCRIPTION OF THE ASPECTS OF THE ACTIVITY

The requirement to describe the aspects of the activity that are covered by the draft environmental management programme are already included in PART A, Section 4, as required.

2.1 Description of activities to be undertaken

2.1.1 Background

Evander Gold Mines Limited (EGM) undertakes underground gold mining operations near the town of Evander in the Mpumalanga Province, and has been operational since 1958. EGM also conducts reprocessing of existing Tailings Storage Facilities (TSF) to extract gold remaining in the tailings at the Elikhulu processing facility. EGM is the owner of a converted mining right (126 MR) which have been approved in terms of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002) (MPRDA). EGM also has an approved Environmental Management Programme (EMPr) for the mining operations and the Elikhulu plant.

EGM currently conduct dewatering activities to abstract groundwater that accumulates underground in order to allow for the continuation of mining operations. The abstracted water is used as part of the EGM operations and a portion is discharged into the authorised Leeuwpan disposal facility. The dewatering operations is included in the EGM Water Use Licence (WUL) (Ref. 08/C12D/GJAIC/6116) and is authorised in terms of Section 21 (j) of the National Water Act (No. 36 of 1998). EGM proposes to develop a facility for the treatment of water emanating from the dewatering operations. The facility will have a maximum treatment capacity of 11 000 m^3/day. The treated water will be used for potable purposes and will replace the need to obtain water from the municipality supply line. This will substantially reduce pressure on the municipal water network and also provide a reliable water source for the mine.

2.1.2 Treatment Plant

The approximate footprint required for the plant and tanks will be 2500m^2. Preparation of the site will entail removal of soil layer, cut to spoil, fill with compacted layers of fill and establish a concrete surface bed. The proposed plant will be fabricated in 12m containers. This will allow for ease of installation and to accommodate potential future modular expansion. It also allows protection of the plant equipment from environmental elements. The in-take raw water will be stored in a 2 000 m3 lined steel water tank located adjacent to the plant.

2.1.3 Shaft #8 Pipeline

EGM also proposes to develop a 4.5km pipeline to convey water from the WTP to the #8 shaft complex. The pipeline will be developed within the existing pipeline servitude and existing supports will be used to establish the pipeline. The pipeline will cross two streams and two wetlands, however these crossing is also included in the EGM Water Use Licence (WUL) (Ref. 08/C12D/GJAIC/6116) and is authorised in terms of Section 21 (c)&(i) of the NWA. As existing supports and culverts will be used to install the pipeline, no additional vegetation clearance is anticipated.

3 COMPOSITE MAP

A map which superimposes the proposed activity, its associated structures, and infrastructure on the environmental sensitivities is provided as Figure 3-1 below.

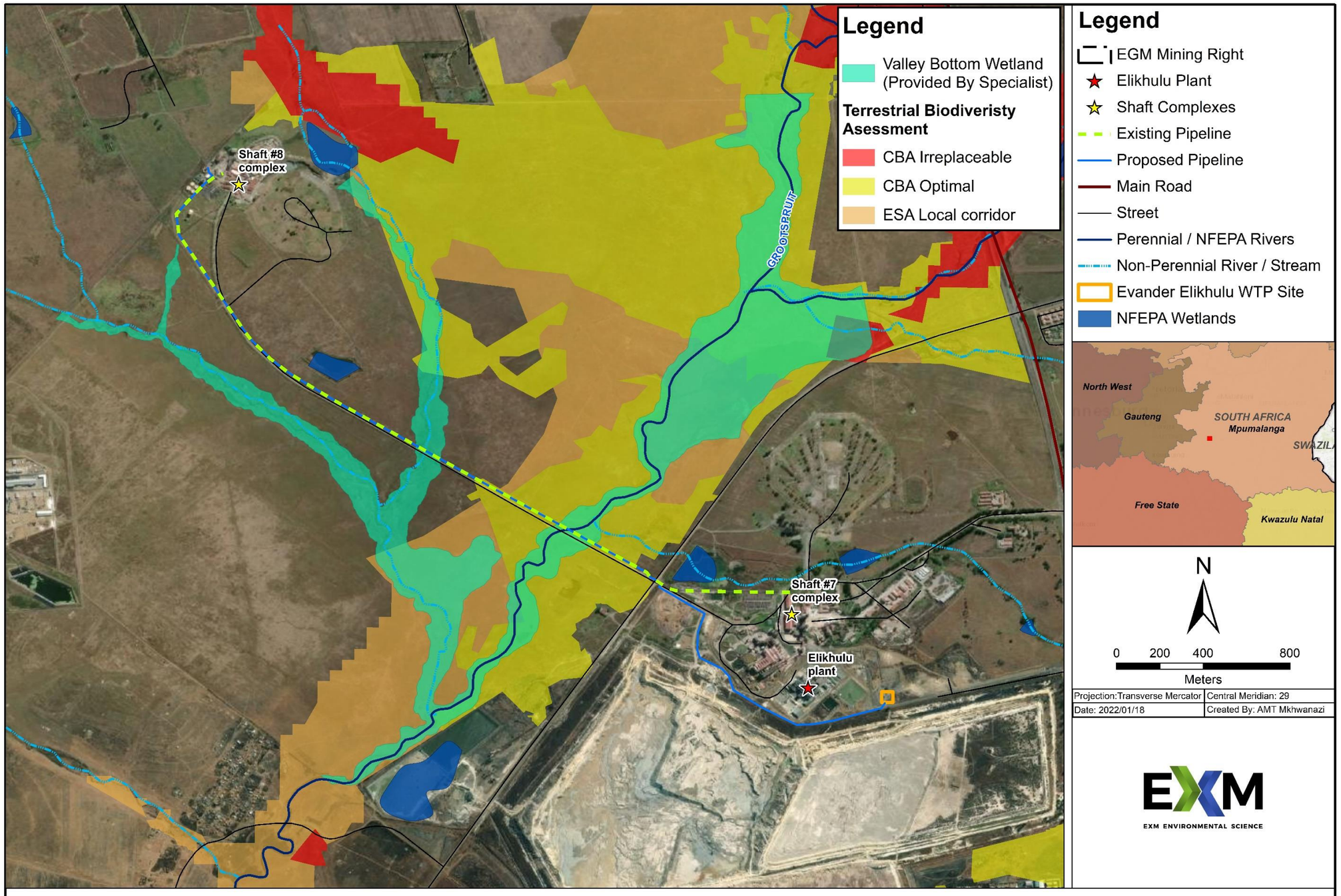


FIGURE 3-1: ENVIRONMENTAL SENSITIVITY MAP

4 IMPACT MANAGEMENT OBJECTIVES

4.1 Closure Objectives

According to the draft Final Rehabilitation, Decommissioning and Mine Closure Plan (2021), the overarching closure objectives for EGM are as follows:

- Legislative compliance, including industry good practices, must be ensured during Decommissioning, Rehabilitation, and Mine Closure planning;
- Mitigate all environmental impacts and aspects according to the provisions and actions of the EMPr(s) and this plan;
- Identify post-closure uses of land occupied by mine infrastructure in consultation with the local authorities and surrounding landowners. Should a suitable use for any mine infrastructure not be found, it will be removed;
- Undertake stakeholder engagement and ensure this closure plan is updated based on their views and concerns. This to ensure that the local workforce and communities are left with sustainable land utilisation options, ensuring post-closure land uses are economically sustainable;
- Ensure no adverse health and safety risk to humans and animals, by sealing and cordoning Shafts and/or Voids to limit access;
- Authorities are satisfied with the extent of rehabilitation and closure criteria;
- Rehabilitate all disturbed land to a condition that facilitates compliance with applicable environmental quality objectives.

Closure Objectives for the Water Treatment Plant and pipeline

- Identify post-closure uses of land occupied by mine infrastructure in consultation with the local authorities and surrounding landowners. Should a suitable use for any mine infrastructure not be found, it will be removed;

4.2 Process for Managing Environmental Damage, Pollution, Pumping and Treatment of Extraneous Water and Ecological Degradation

The proposed WTP will be established in an area that has been disturbed by historic activities, while the proposed pipeline will be established on existing pipeline supports and existing culverts. These two factors play a large role in managing and minimising damage, pollution and ecological degradation prior to the implementation of mitigation measures.

The area in which the WTP will be established has been disturbed by historic activities and no impacts on biodiversity is anticipated. A large portion of the proposed pipeline (approximately 2.7km) will be established outside the mine footprint in natural areas. The pipeline will cross a Critical Biodiversity Area (CBA). The pipeline will be established on existing pipeline supports and existing culverts will be used. It is anticipated that no additional vegetation clearance will be undertaken during the establishment of the pipeline.

The brine emanating from the RO treatment process will be stored in buffer tanks before it is either conveyed via a pipeline or transported via tankers to the Elikhulu plant and used for internal processing. The pipeline will be developed within the existing site and not within any natural areas.

The following mitigation measures, detailed in the BAR and EMPr (this document) must be implemented to minimise environmental damage and pollution risks:

- Limit footprint of construction to demarcated areas;
- No removal of natural vegetation during installation of pipeline;
- Inspect site every second week to ensure no additional vegetation is removed;
- No vegetation clearance in wetland areas;
- Limit activity within wetland and stream crossing to what is absolutely necessary;
- Dust suppression on exposed areas during construction activities if increased dust is noted;
- Brine must be managed to prevent any spillages;
- Ensure adequate management of hazardous substances to prevent spillages; and
- Spill kits must be readily available to clean up spillages.

4.3 Potential Risk of Acid Mine Drainage

4.3.1 Steps taken to investigate, assess and evaluate the impact of acid mine drainage

There is no risk or potential for acid mine drainage as a result of the construction and operation of the proposed water treatment plant and pipeline at EGM.

4.4 Water use licence application

The proposed construction and operation of the WTP will not trigger any water uses in terms of Section 21 of the National Water Act (Act No. 36 of 1998). Application for a Water Use Licence (WUL) is therefore not required for the project. The pipeline that will be established to convey water to the #8 shaft complex will cross the Grootspruit river and a secondary tributary thereof (as well as the associated valley bottom wetlands). However, the supports and culverts of existing pipeline will be used to establish the proposed pipeline which has been authorised under the approved EGM WUL (Ref. 08/C12D/GJAIC/6116) in terms of Section 21(c)&(i) of the NWA. No additional disturbance is therefore anticipated or authorisations required for the pipeline.

The dewatering activities that will supply the proposed WTP with groundwater has also been authorised under the EGM WUL in terms of Section 21 (j) of the NWA.

5 ENVIRONMENTAL MANAGEMENT PROGRAMME

The Table below contains the measures that must be implemented to prevent/minimise potential environmental impacts at EGM during the construction and operation of a water treatment plant.

TABLE 5-1: ENVIRONMENTAL MANAGEMENT PROGRAMME

Aspect (activity)	Impact	Management outcome	Life cycle phase	Mitigation	Compliance with standards/legislation	Monitoring required
Soil						
Removal of topsoil - WTP	Loss of topsoil	Minimise loss of topsoil	Construction	Store topsoil in a demarcated area during construction. Care must be taken to prevent erosion on stockpiles. Redistribute topsoil over the footprint (not used for foundation establishment) after the concrete foundation has been completed.	Conservation of Agricultural Resources Act	ECO inspection every second week
Concrete management	Soil pollution	Prevent soil pollution	Construction	Mixing of concrete (if premix is not used) only to be conducted in a demarcated area with containment measures in place. Concrete spills outside demarcated construction footprint must be cleaned appropriately.	National Water Act	None
Biodiversity						
Removal vegetation - WTP	Impacts on biodiversity	Prevent disturbance of natural vegetation	Construction	Limit footprint to demarcated area.	National Environmental Management: Biodiversity Act	ECO inspection every second week
Potential disturbance of	Impacts on biodiversity	Minimise disturbance to	Construction	No removal of natural vegetation during installation of pipeline – existing		

Aspect (activity)	Impact	Management outcome	Life cycle phase	Mitigation	Compliance with standards/legislation	Monitoring required
vegetation – installation of pipeline		natural vegetation		pipeline supports and culverts to be used. Care must be taken during installation to minimise disturbance (trampling) as a result of human and equipment movement. No access roads to be constructed. Inspect site every second week to ensure no additional vegetation is removed. No hunting/trapping or collecting of any faunal species is allowed during installation of pipeline.		ECO inspection every second week
Surface Water Resources						
Installation of pipeline over wetland/stream	Potential disturbance of wetlands and riparian habitat	Minimise disturbance to aquatic habitats.	Construction	No vegetation clearance in wetland areas - existing pipeline supports and culverts to be used. Inform contractors of the presence of the wetland and streams – as well as the requirement not to disturb these areas. Limit activity within wetland and stream crossing to what is absolutely necessary. No hazardous substance or waste allowed in wetland areas. If possible, indicate where the wetland area starts along the pipeline to ensure contractors are aware of the location thereof.	National Water Act National Environmental Management: Biodiversity Act	ECO inspection every second week
Maintenance of pipeline	Potential disturbance of wetlands and riparian habitat	Minimise disturbance to aquatic habitats.	Operational	No vegetation clearance allowed during maintenance of pipeline. Limit activity within wetland and stream crossing to what is absolutely necessary during maintenance.	National Water Act National Environmental Management: Biodiversity Act	None

Aspect (activity)	Impact	Management outcome	Life cycle phase	Mitigation	Compliance with standards/legislation	Monitoring required
Sewage management – potential spills	Soil/stormwater pollution	Effective sewage management	Construction and Operational	Any sewage spillages must be reported and cleaned appropriately. Any sewage spillages must be reported and cleaned appropriately. Any sewage spillages must be reported and cleaned appropriately. The conservancy tank system must be adequately maintained by competent personnel. In addition, the installation of proper overflow drainage will aid in reducing the risk of contamination. Installation of the conservancy tank must be supervised by a registered engineer or adequately competent person.	National Water Act Product Specifications	Conservancy tank system to be monitored by the plant manager.
Air Quality						
Vehicle movement/earth works	Increased dust fall – nuisance conditions	Minimise dust emissions	Construction	Implement strict speed limits on site. Dust suppression on exposed areas during construction activities if increased dust is noted.	National Dust Control Regulations	EGM to continue current dust fall monitoring program.
Hazardous Substances Management						
Storage and use of hazardous substances – potential spillages	Stormwater pollution	Prevent spillages	Construction and decommissioning	Lubricants and other hydrocarbons must be stored in a roofed building or in a dedicated area with containment measures in place. Maintenance to be undertaken in a roofed building/container or in an area (if outside) with containment measures in place. Spill kits must be readily available to clean up spillages.	Hazardous Substances Act National Water Act	ECO inspection every second week

Aspect (activity)	Impact	Management outcome	Life cycle phase	Mitigation	Compliance with standards/legislation	Monitoring required
				Contaminated soil must be managed as hazardous waste and managed accordingly.		
				Good housekeeping practices to be implemented at the workshop.		
				Trip trays to be placed under vehicles/equipment susceptible of leakages.		
				Safety Data Sheets must be available for all hazardous substances stored on site.		
				Refuelling (if any) to be conducted in a dedicated area with stormwater measures in place to capture spillages		
				Large spills to be reported to EGM's environmental department and managed according to the internal incident procedure.		
Storage and use of hazardous substances – potential spillages	Stormwater pollution	Prevent spillages	Operational	Small volumes of hazardous substances must be stored in a locked chemical cage within a roofed structure.	Hazardous Substances Act National Water Act	None
				Provide bunding for larger volumes of hazardous substances.		
				Chemicals to be stored in compatible containers.		
				Spill response equipment must be readily available and compatible with hazardous substances.		
				Safety Data Sheets must be available for all hazardous substances stored on site.		
Waste Management						
Brine production from process - potential spillages	Water/soil pollution	Prevent brine spillages	Operational	Store brine in a sealed buffer tank.	National Water Act National	Pressure Monitoring
				Automatic pressure monitoring on pipeline to detect any leakages		

Aspect (activity)	Impact	Management outcome	Life cycle phase	Mitigation	Compliance with standards/legislation	Monitoring required
				Clean up any brine spillages appropriately.	Environmental Management Waste Act	
Waste Management	Litter/nuisance conditions Environmental pollution	Implement effective waste management practices	Construction, operational and decommissioning	No mixing of general and hazardous waste allowed.	National Environmental Management Waste Act	Waste manifests and accurate Record keeping
				Waste management to be integrated with the EGM procedure.		
				Hazardous Waste		
				Provide designated labelled bins/ skips at strategic positions for the placement of hazardous waste. These containers must not be overfilled.		
				Contaminated soil must be managed as hazardous waste.		
				All hydrocarbon contaminated material (rags, PPE, containers etc.) must be placed in a labelled, skip and taken to the EGM central yard. After which it must be disposed at a licenced facility.		
				Spent chemicals should not be disposed in the sewer system, but according to the product specifications.		
				General waste		
				Provide labelled bins and skips at strategic locations for the placement of general waste. These containers must not be overfilled.		
				Only dispose non-recyclable general waste at a licenced disposal site. Delivery notes to be obtained.		
				No littering must be allowed on adjacent areas.		

6 ENVIRONMENTAL CONTROL OFFICER

An Environmental Control Officer (ECO) should be appointed to conduct inspections every second week to ensure that the conditions of the Environmental Authorisation (EA) and this EMPr are adhered to. Non-compliances should be raised, communicated to site management and rectified. Proof of inspections must be kept on file. It is important that the ECO must inspect/oversee the pipeline installation to ensure that no additional vegetation clearance is conducted, especially in the wetlands, stream crossings and CBA.

7 MINE CLOSURE PLAN AND FINANCIAL PROVISION

7.1 Closure objectives

According to draft EGM's Final Rehabilitation, Decommissioning and Mine Closure Plan (2021), the goal is underpinned by the current objectives for closure at EGM, which may also be refined as the end of LOM approaches and this plan matures. These include:

- Legislative compliance, including industry good practices, must be ensured during Decommissioning, Rehabilitation, and Mine Closure planning;
- Mitigate all environmental impacts and aspects according to the provisions and actions of the EMPr(s) and this plan;
- Identify post-closure uses of land occupied by mine infrastructure in consultation with the local authorities and surrounding landowners. Should a suitable use for any mine infrastructure not be found, it will be removed;
- Undertake stakeholder engagement and ensure this closure plan is updated based on their views and concerns. This to ensure that the local workforce and communities are left with sustainable land utilisation options, ensuring post-closure land uses are economically sustainable;
- Ensure no adverse health and safety risk to humans and animals, by sealing and cordoning Shafts and/or Voids to limit access;
- Authorities are satisfied with the extent of rehabilitation and closure criteria;
- Rehabilitate all disturbed land to a condition that facilitates compliance with applicable environmental quality objectives.

7.2 Confirmation of consultation of closure objectives with landowners

The Basic Assessment Report and the Environmental Management Programme will be subjected to a public participation process in accordance with Regulations 41 of the EIA Regulations (GNR. 982 of 4 December 2014, as amended). This report and the closure plan will be made available during the public participation for landowners to review and provide comment on.

7.3 Rehabilitation Plan

A Final Rehabilitation, Decommissioning and Mine Closure Plan (2021) (still in draft format) has been developed for the EGM operations. Section 9 of the plan specifies the preferred closure options and associated actions to achieve the closure objectives. The preferred closure option for the proposed water treatment plant and associated pipeline as per Section 9 of EGM's closure plan is as follows:

> "*utilisation of existing service infrastructure, including water/sewage treatment plants, pipelines, electrical lines etc., to supply additional services to nearby towns*"

It is therefore anticipated that the WTP and pipelines will be utilised post closure as part of the end land use scenario and will not be removed post closure and therefore no rehabilitation will be required. Due to the fact that existing pipeline supports will be used to establish the pipelines, no additional rehabilitation other than that already included in the closure plan will be required if the pipelines will not be used post closure.

It is however recommended that EGM approach third parties proactively during the LOM to ensure that contracts are in place for the transfer of infrastructure that can be utilised post closure. It is recommended that the WTP and pipelines must be included in the annual update of the closure plan to ensure that the infrastructure are accounted for as part of the closure strategy.

7.4 Explain how the rehabilitation plan is compatible with the closure objectives

As per Section 6.1 of this report, the following has been included as one of the EGM closure objectives:

> "Identify post-closure uses of land occupied by mine infrastructure in consultation with the local authorities and surrounding landowners. Should a suitable use for any mine infrastructure not be found, it will be removed"

The post closure transfer and utilisation of the WTP and pipelines to a third party such as the local municipality is in line with EGM's closure objective and is a preferred option to support local communities.

7.5 Quantum of Financial Provision required to manage and rehabilitate the site

As per the above discussion and according to the EGM closure plan, it is envisioned that the WTP and pipelines will remain post closure. The project will therefore not require the submission of financial provision as no additional rehabilitation will be required for the proposed infrastructure. The quantum can be adjusted during annual updates if no post closure utilisation of the infrastructure can be established.

8 MECHANISMS FOR MONITORING COMPLIANCE

A monitoring programme will assist in determining whether mitigation and management measures are being implemented and/or if they are effective relating to the proposed WTP. Monitoring of the environment prior to the start of activities (establishment of baseline conditions) and continued monitoring throughout the life of the operation will help identify environmental impacts by identifying and tracking potential pollution trends. The monitoring data collected will also provide input into the planning for closure at the end of the life of mine as a whole.

The following monitoring is already undertaken by EGM which is applicable to the proposed project:

- Biomonitoring;
- Water Quality Monitoring; and
- Dust Monitoring

8.1 Biomonitoring

EGM already undertakes biannual biomonitoring within the mining right area at various locations. The purpose of the program is to fulfil the requirements for monitoring the ecological integrity of the surrounding aquatic resources. The Biomonitoring undertaken includes assessment of the following: *in situ* water quality, habitat integrity, macro-invertebrate integrity, diatom community assessment, and Whole Effluent Toxicity (WET) Testing. Data obtained is used to establish the PES and to predict spatial trends in ecological integrity. **Error! Reference source not found.** table below provides the co-ordinates of the biomonitoring site in the Grootspruit stream downstream of the pipeline crossing.

TABLE 8-1: MONITORING POINTS STUDIED AND THE SIGNIFICANCE OF EACH STREAM.

Point	Stream	Assessments	Latitude	Longitude
Km2	Grootspruit	SASS5, MIRAI, IHAS and IHI	26°28'07.8" S	29°04'43.3" E

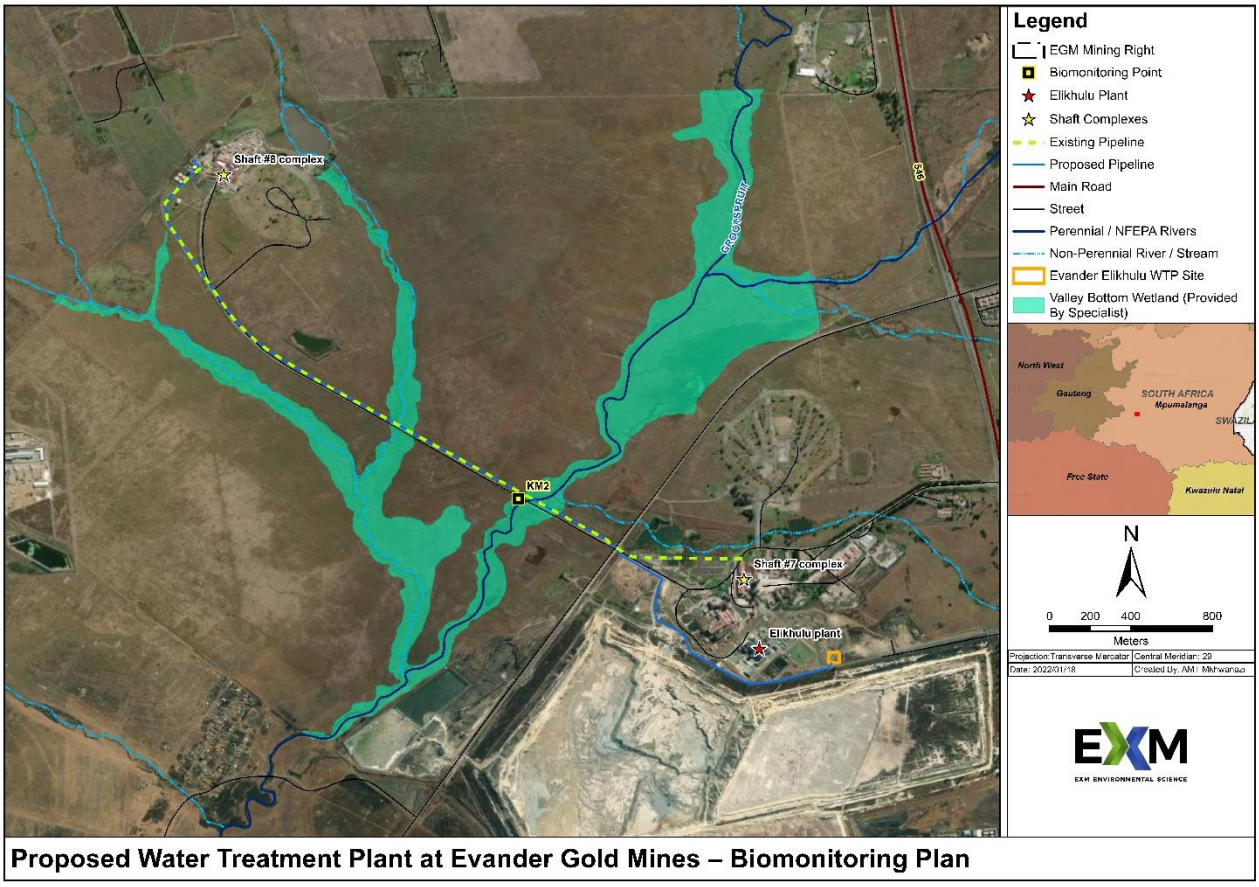


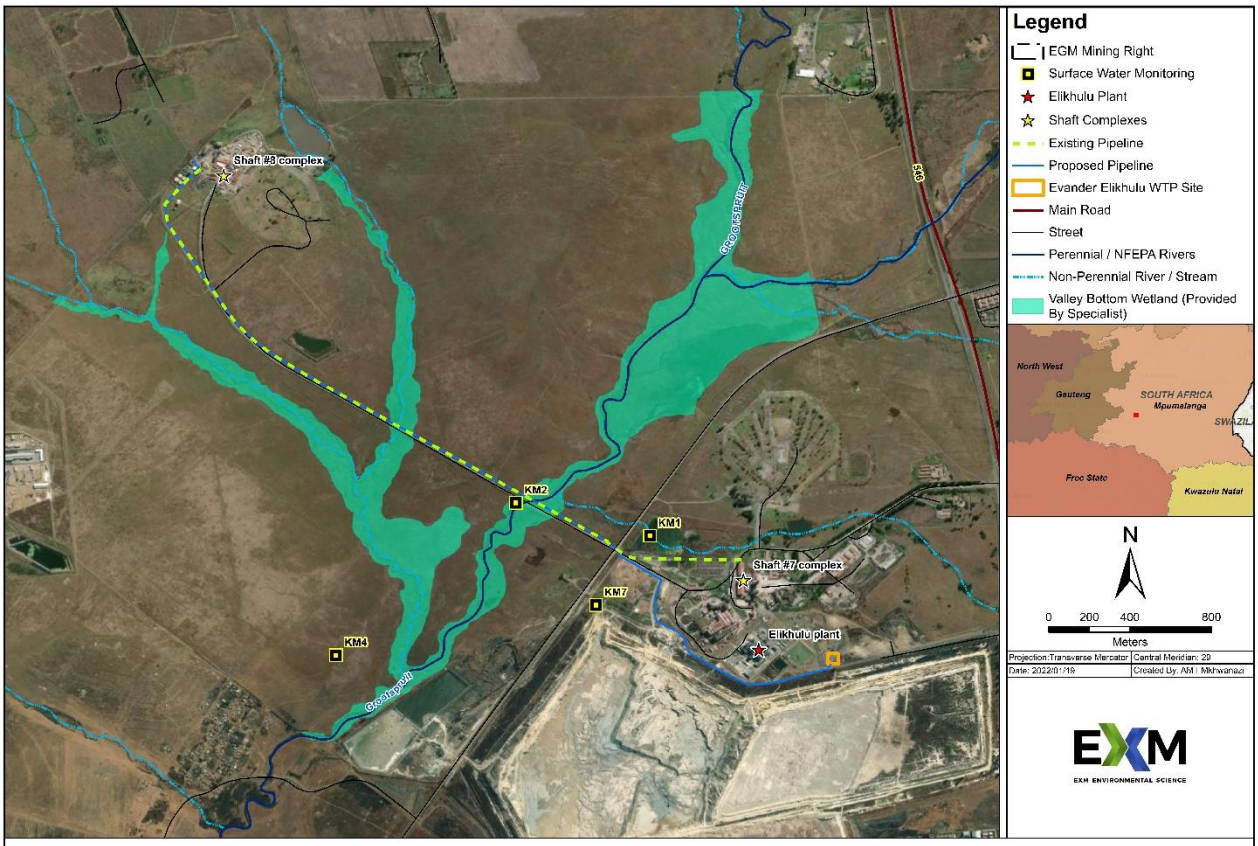
FIGURE 8-1: BIOMONITORING SITE

8.2 Dust Monitoring

Although it is not anticipated that the project will contribute significantly to dust generation, EGM has an extensive dust fall monitoring network which can be used to detect anomalies related to dust generation as a result of the project during construction.

8.3 Surface Water Quality Monitoring

EGM has an extensive surface water quality monitoring network in terms of the WUL requirements. Water quality is monitored on a monthly/quarterly basis. The map below shows some of the monitoring points in proximity to the project.



Proposed Water Treatment Plant at Evander Gold Mines – Surface Water Monitoring Plan

8.4 Submission of compliance audits

Compliance Audits will be undertaken in accordance with legislative requirements (as applicable at the time) including:

(1) Regulation 34 of the EIA Regulations (GN. 326 of 2017);

Compliance audits will be submitted bi-annually during construction and annually during operations or in accordance with the Environmental Authorisation.

9 ENVIRONMENTAL AWARENESS PLAN

9.1 Environmental Induction Training

Environmental awareness and training is already a part of the operating procedures of EGM and will continue to be so with the proposed project. It is important for employees to be fully aware of the risks of the work and thus training is an important part of managing this risk as well as ensuring the correct response and remedial actions are followed in the case of an incident.

The purpose of induction training is to promote a general awareness of the sensitivity of the environment, the legal commitments and the aspirations of EGM in terms of environmental management and the environmental consequences of individual actions. Induction is applicable to all employees, contractors and service providers that will be working within the mining area.

Environmental Induction for Employees and Service Providers

The induction training for employees, contractors and service providers is to take the form of a presentation including:

- A description of environmental sensitivities in the environment;
- A description of environmental legal requirements and the mine's commitment to comply with these requirements;
- A description of broad-based objectives of environmental management at EGM;
- A discussion of how individual actions can impact on the environment;
- A discussion of how individual actions can assist in the successful implementation of the environmental management programme (EMPr);
- The Code of Conduct.

All employees are to sign that they have understood and will comply with the Code of Conduct. employees are to be re-inducted on an annual basis (after returning from their annual leave).

Requirements

- Environmental induction material (posters, power point presentations etc.);
- Code of Conduct;
- Register of inducted Employees, service providers and contractors.

9.2 General Environmental Awareness Programme

Environmental awareness and training is already a part of the operating procedures of EGM and will continue to be so with the proposed project. It is important for employees to be fully aware of the risks of the work and thus training is an important part of managing this risk as well as ensuring the correct response and remedial actions are followed in the case of an incident.

The purpose of the general environmental awareness programme is to promote ongoing environmental awareness amongst the workforce. It will focus on addressing environmental issues which have been identified as problematic through environmental audits, complaints received, or environmental monitoring undertaken. This awareness campaign can form part of daily/ weekly toolbox talks and must cover all applicable topics related to environmental

management.

9.2.1 Job Specific Environmental Awareness Training

The purpose of job specific environmental awareness training is to ensure that Employees within the specific management units are equipped to implement the actions committed to in the EMPr. All members of the workforce are to be subject to job specific environmental training. This training is undertaken by the managers of each of the management units. Supervisors will be trained to assist with the implementation and training of the work force.

Environmental Risk Identification

The environmental risks associated with each management area are to be identified by the manager and supervisors together with the technical services manager. The risks are to be documented and actions to reduce these risks should be developed. The actions are to ensure overall compliance with the commitments of the EMPr.

Training

All members of the workforce (mining, plant workers, administration etc.) are to be subject to job specific training. This may include but not be limited to:

- Preventing pollution;
- Spill prevention and clean-up procedures;
- The location and purpose of material safety data sheets (MSDSs);
- Managing waste;
- No-go areas; and
- Incident reporting.

The aspects to be covered however are dependent on the findings of the individual risk assessments. This is to be undertaken for each management area initially. Thereafter all new members of the workforce are to undergo environmental training as part of the training required to do their particular job.

10 SPECIFIC INFORMATION REQUIRED BY THE COMPETENT AUTHORITY

None applicable.

11 UNDERTAKING

I, **Trevor Hallatt**, acting as independent environmental assessment practitioner hereby confirm:

- The correctness of the information provided in the reports;
- The inclusion of comments and inputs from stakeholders and I&APs;

- The inclusion of inputs and recommendations from specialist reports, where relevant; and
- The acceptability of the project in relation to the finding of the assessment and the level of mitigation proposed.

Report Sign-Off			
Name	**Designation**	**Signature**	**Date**
Trevor Hallatt	EAP Senior Environmental Scientist Pr.Sci.Nat		2022/01/25