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GOLD ONE AFRICA LTD

ENVIRONMENTAL AUDIT REPORT OF THE VENTERSBURG GOLD MINE, FREE STATE PROVINCE

DECEMBER 2021

Prepared for:

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DMR REF. FS 30/5/1/2/2/10036 MR

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ACRONYMS

CA	Competent Authority
DMR / DMRE	Department of Mineral Resources / Department of Mineral Resources and Energy
DWS	Department of Water Affairs / Department of Water and Sanitation
EA	Environmental Authorisation
EAP	Environmental Assessment Practitioner
EAR	Environmental Audit Report
ECO	Environmental Control Officer
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
EMPr	Environmental Management Programme
EPRP	Emergency Preparedness and Response Plan
IEA	Integrated Environmental Authorisation
IAP	Interested and Affected Party
LoM	Life of Mine
MPRDA	Minerals and Petroleum Resource Development Act (No. 28 of 2002)
NEMA	National Environmental Management Act (No. 107 of 1998)
NHRA	National Heritage Resources Act (No. 25 of 1999)
NNR	National Nuclear Regulator
NNRA	National Nuclear Regulator Act (No. 47 of 1999)
NWA	National Water Act
PCD	Pollution Control Dam
PHRAG	Provincial Heritage Resources Authority of Gauteng
ROM	Run of Mine
SAHRA	South African Heritage Resources Act
TCTA	Trans Caledon Tunnel Association
TSF	Tailings storage facility
WRD	Waste rock dump
WULA	Water Use Licence Application
WUL	Water Use Licence

1 INTRODUCTION

1.1 Background

The Gold One Africa (Ltd) Ventersburg Gold Mine is a proposed underground mining operation including an on-site processing plant and supporting infrastructure. The Project is situated between the towns of Ventersburg and Hennenman, on portions of the farms Klippan 77, La Rochelle 760, Uitsig 723, Vogelsrand 720, and Whites 747 in the Free State Province (Figure 1 and Figure 2).

Gold One Africa has been granted a Mining Right in terms of the Mineral and Petroleum Resources Development Act, No. 28 of 2002 (MPRDA), and has received an Integrated Environmental Authorisation (IEA) for activities listed in terms of the National Environmental Management Act, No. 107 of 1998 (NEMA) Environmental Impact Assessment (EIA) Regulations (GNR982 of 2014) (IEA Ref. FS 30/5/1/2/3/2/1 (10036) EM).

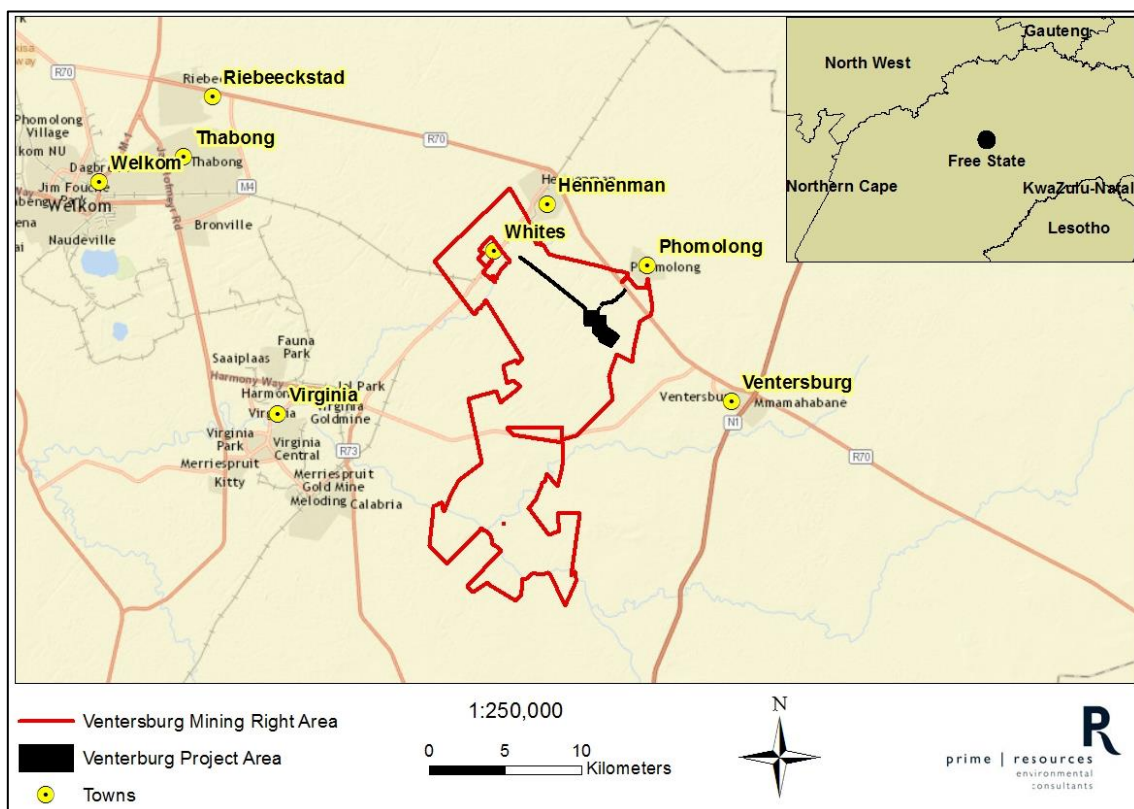


Figure 1. Ventersburg Gold Mine project area and Mining Right Area

1.2 Project description

The Ventersburg Gold Mine is anticipated to have a life of mine (LoM) of 17 years. The surface infrastructure will consist mainly of a shaft area and mining infrastructure, processing plant, a waste rock dump (WRD) and tailings storage facility (TSF), including storm water management measures for each of the surface infrastructure components. A water treatment plant will treat excess underground water, which will then be pumped to a discharge point at the Rietspruit.

Construction of the mine will be completed within four years. A period of 1 year has been assumed for decommissioning and rehabilitation. All surface infrastructure will be removed apart from the TSF, WRD and residual pollution control facilities. The area where the proposed surface infrastructure is to be removed will

be rehabilitated to be able to support a suitable land use based on the land capability and planning objectives for the area i.e., grazing land.

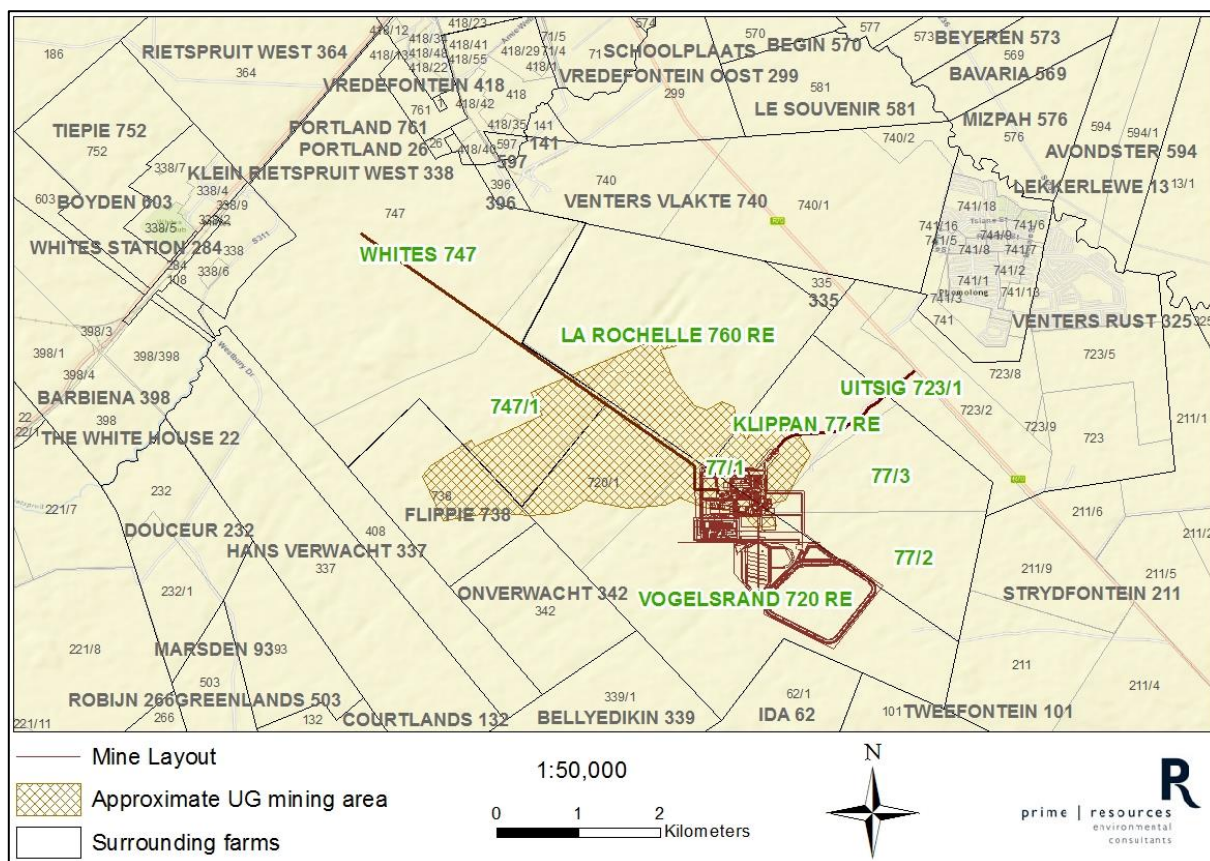


Figure 2. Ventersburg mining area and surface infrastructure (as per 2017 submission)

Note: The EIA for the Project was undertaken during 2016/2017 and submitted in June 2017, and again in September 2017, addressing comments made by the DMR. No changes were made to the project description or layout for the September 2017 submission. Environmental Authorisation was granted in January 2018.

As a parallel process, the Water Use Licence Application (WULA) was submitted in 2017 following several recommendations by the Department of Water and Sanitation. The final submission in November 2019 includes a slightly revised layout of the surface infrastructure, to avoid the 500m regulated zone around wetlands. Refer to Figure 3 and Figure 4. A Water Use Licence (WUL) was granted in February 2021.

There has been no update to the EMPr to date to account for the revised layout of surface infrastructure as per Figure 4. This audit is based on the September 2017 EMPr submission and will include in its recommendations that the EMPr must be updated to reflect the revised layout of infrastructure and to ensure that it aligns with the final WULA submitted in November 2019.

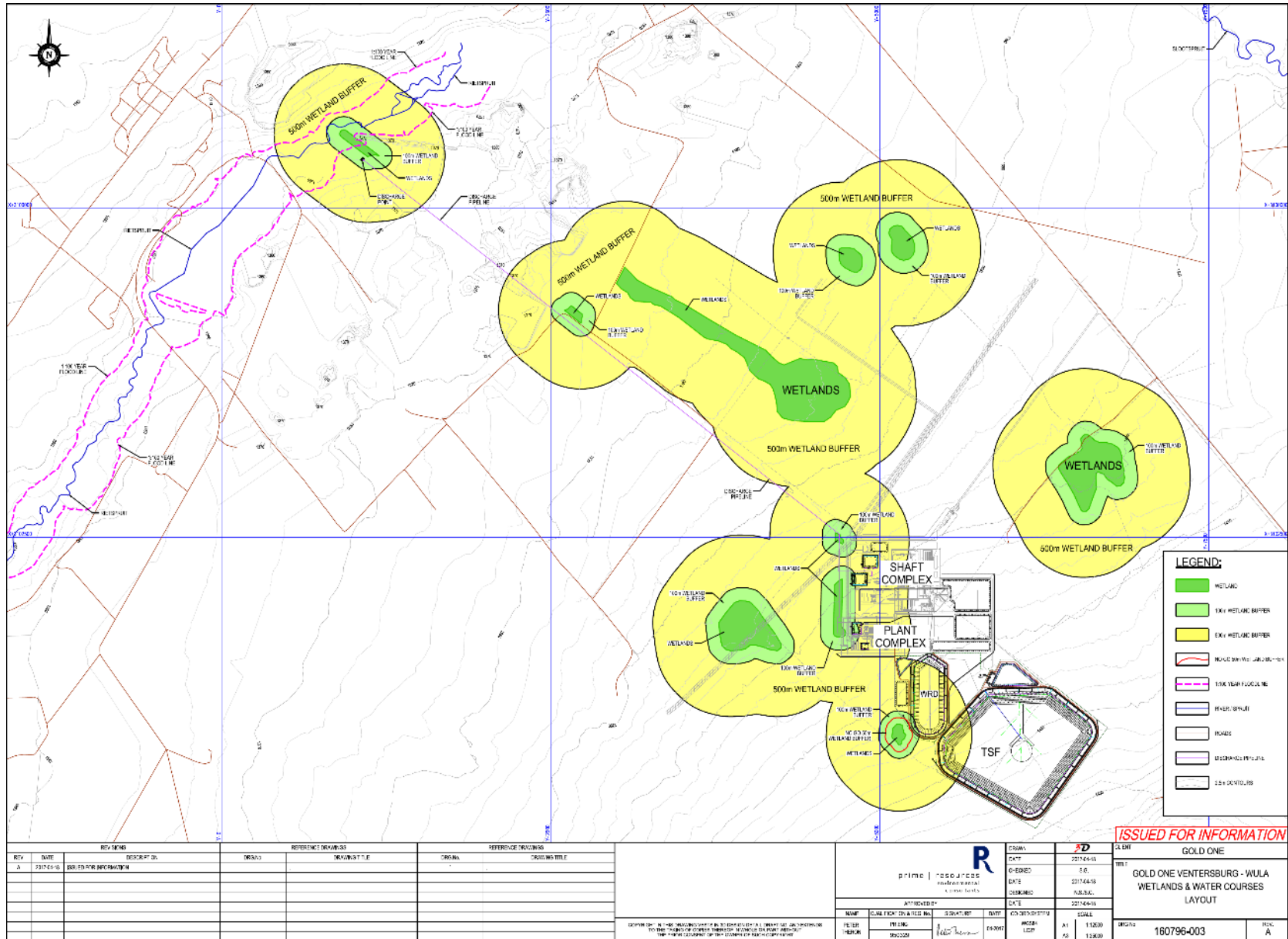


Figure 3. Surface infrastructure showing regulated area of wetlands (500m) (as per 2017 WULA submission and aligning with EMP)

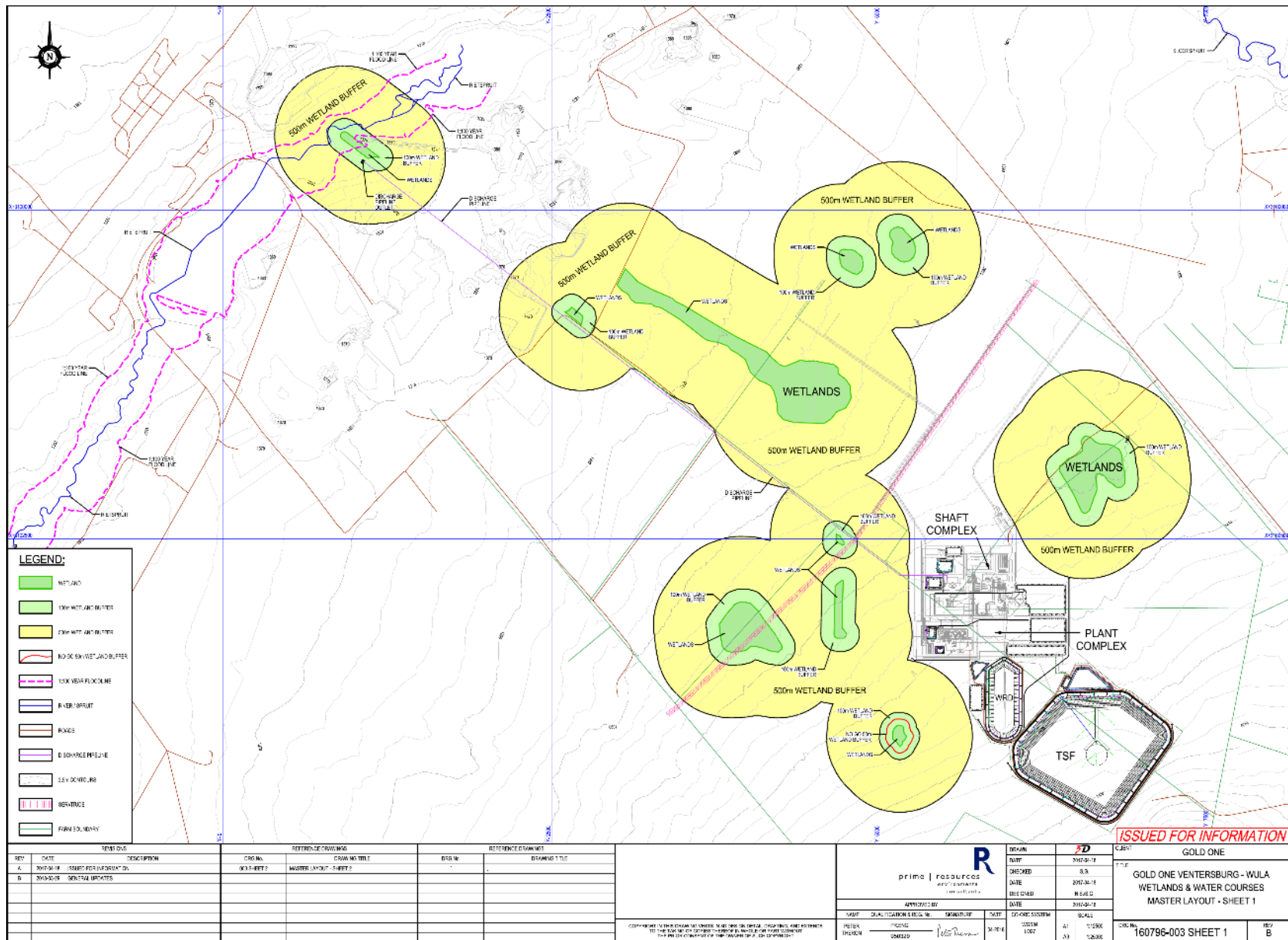


Figure 4. Revised surface infrastructure layout showing regulated area of wetlands (500m) (as per final 2019 WULA submission)

2 LEGAL FRAMEWORK

2.1 MPRDA (2002) and MPRDA Regulations (2004), as amended

Previously, Regulation 55 of the Mineral and Petroleum Resources Development Act No. 28 of 2002 (MPRDA) Regulations (GNR527 of 2004) addressed the monitoring and performance assessments of the EMPr. However, this was repealed by amendments to the MPRDA Regulations in 2020 (GNR420 of 2020), indicating that the content of Regulation 55 performance assessments (audits) is now regulated by Regulations 34 to 37 of the National Environmental Management Act (No. 107 of 1998) (NEMA) EIA Regulations.

2.2 NEMA (1998), as amended and EIA Regulations (2014), as amended

The Competent Authority (CA) for this Project is the Department of Mineral Resources and Energy (DMRE), Gauteng Regional Office, regulating in terms of the National Environmental Management Act (No. 107 of 1998), as amended (NEMA) and the 2014 Environmental Impact Assessment (EIA) Regulations (GNR982) as amended.

EIA Regulations 34 to 37 (GNR982 of 2014 as amended) are relevant to the auditing of the Environmental Authorisation (EA) and Environmental Management Programme (EMPr) and are summarised below.

Regulation 34. Auditing of compliance with EA, EMPr and closure plan

- (1) The holder of an EA must, for the period during which the EA, EMPr and closure plan remain valid –
 - (a) ensure that compliance with the conditions of the EA, EMPr and closure plan, is audited; and
 - (b) submit an environmental audit report (EAR) to the DMRE
- (2) The EAR must –
 - (a) be prepared by an independent person with the relevant environmental auditing expertise
 - (b) provide verifiable findings, in a structured and systematic manner, on –
 - (i) performance against and compliance with the provisions of the EA, EMPr and closure plan; and
 - (ii) the ability of the measures contained in the EMPr and closure plan, to sufficiently provide for the avoidance, management and mitigation of environmental impacts associated with the undertaking of the Table 1); and
 - (c) be conducted and submitted to the CA at intervals as indicated in the EA.
- (3) The EAR must determine –
 - (a) the ability of the EMPr and closure plan to sufficiently provide for the avoidance, management and mitigation of environmental impacts associated with the undertaking of the activity on an ongoing basis, and with the closure of the facility; and
 - (b) the level of compliance with the provisions of EA, EMPr and closure plan.
- (4) Where the findings of the EAR indicate –
 - (a) insufficient mitigation of environmental impacts; or
 - (b) insufficient levels of compliance with the EA, EMPr or closure plan;
the holder must submit recommendations to amend the EMPr or closure plan in order to rectify the shortcomings identified in the EAR.
- (5) When submitting recommendations, such recommendations must have been subjected to a public participation process, as agreed with the CA and as appropriate to bring the proposed amendment/s

to the attention of potential and registered interested and affected parties (IAPs), for approval by the CA.

- (6) Within 7 days of submitting of an EAR to the CA, the holder of an EA must notify all potential and registered IAPs of the submission of that report, and make such report immediately available –
- (a) to anyone on request; and
 - (b) on a publicly accessible website, where the holder has such a website.
- (7) An EAR must contain all information set out in Appendix 7 to these Regulations.

Table 1. Contents of an Environmental Audit Report in terms of Appendix 7 of the EIA Regulations (2014)

Ref	Requirement	Section of report
3(1)(a)	The environmental audit report must contain details of - i. The independent person who prepared the environmental audit report; and ii. The expertise of the independent person that compiled the environmental audit report	Section 4.1
3(1)(b)	A declaration that the independent auditor is independent in a form as may be specified by the competent authority	Appendix A
3(1)(c)	An indication of the scope of, and the purpose for which, the environmental audit report was prepared	Section 3
3(1)(d)	A description of the methodology adopted in preparing the environmental audit report	Section 4
3(1)(e)	An indication of the ability of the EMPr, and where applicable, the closure plan, to i. Sufficiently provide for the avoidance, management and mitigation of environmental impacts associated with the undertaking and closure of the activity on an ongoing basis ii. Ensure compliance with the provisions of the EA, EMPr, and where applicable, the closure plan	Section 6.2
3(1)(f)	A description of any assumptions made, and any uncertainties or gaps in knowledge	Section 4.5
3(1)(g)	A description of any consultation process that was undertaken during the course of carrying out the environmental audit report	Section 4.3
3(1)(j)	A summary and copies of any comments that were received during any consultation process	Section 4.3
3(1)(k)	Any other information requested by the competent authority	Section 4.3

Regulation 35. Amendment of EMPr or closure plan as a result of an audit

- (1) The CA must consider the EAR and amended EMPr and closure plan, and approve such amended EMPr and amended closure plan, if it is satisfied that it sufficiently provides for avoidance, management and mitigation of environmental impacts associated with the undertaking of the activity, or the closure of the facility, and that it has been subjected to an appropriate public participation process.
- (2) Prior to approving an amended EMPr or closure plan, the CA may request such amendments to the EMPr or closure plan as it deems appropriate to ensure that the EMPr sufficiently provides for avoidance, management and mitigation of environmental impacts associated with the undertaking of the activity or to ensure that the closure plan sufficiently provides for avoidance, management and mitigation of environmental impacts associated with the closure of the facility.

Regulation 36. Other amendments of EMPr or closure plan

- (1) Where an amendment is required to the impact management actions of an EMPr, such amendments may immediately be effected by the holder and reflected in the next EAR submitted as contemplated in the EA and regulation 34.
- (2) Where an amendment to the impact management outcomes or objectives of an EMPr or an amendment of the closure objectives of a closure plan is required before an audit is required in terms of the EA, an EMPr or closure plan may be amended on application by the holder of the EA.

Regulation 37. Amendment of EMPr or closure plan on application by holder of EA

- (1) Where the holder of an EA identifies amendments to the impact management outcomes or objectives of the EMPr or amendments to the closure objectives of the closure plan before an audit is required in terms of the EA, such holder must notify the CA of its intention to amend the EMPr or closure plan at least 60 days prior to submitting such amendments to the EMPr or closure plan to the CA for approval.
- (2) The holder of the EA must invite comments on the proposed amendments to the impact management outcomes or objectives of the EMPr or amendments to the closure objectives of the closure plan from potential IAPs, including the CA, by using any of the methods provided for in the Act for a period of at least 30 days.
- (3) Reasonable alternative methods, as agreed to by the CA, to invite comments may be used in those instances where a person desires but is unable to participate in the process due to –
 - (a) illiteracy
 - (b) disability, or
 - (c) any other disadvantage.
- (4) The invitation to comment must include an indication that any comments to the proposed amendments must be submitted to the holder of the EA within 30 days of such invitation.
- (5) If no comments are received, the holder of the EA may amend the EMPr or closure plan in accordance with its intention and submit the amended EMPr or closure plan to the CA for approval within 60 days of inviting comments.
- (6) Prior to approving an amended EMPr or closure plan contemplated in sub-regulation (5), the CA may request such amendments to the EMPr or closure plan as it deems appropriate to ensure that the EMPr sufficiently provides for avoidance, management and mitigation of environmental impacts associated with the undertaking of the activity or to ensure that the closure plan sufficiently provides for avoidance, management and mitigation of environmental impacts associated with the closure of the facility.
- (7) If comments are submitted to the holder of the EA, such holder must submit such comments to the CA, including responses to such comments, together with the proposed amended EMPr or closure plan.
- (8) The CA must, within 30 days of receipt of the information consider such information and issue a decision to approve the amended EMPr or closure plan or not.
- (9) After the CA has reached a decision, the CA must, within 5 days –
 - (a) provide the holder of the EA with its decision, including the amended EMPr or closure plan if the decision was to approve the amended EMPr or closure plan, as well as reasons for the decision
 - (b) draw the attention of the holder of the EA to the fact that an appeal may be lodged against the decision in terms of the National Appeals Regulations; and
 - (c) instruct the holder of the EA to, within 14 days of the date of the decision, inform the parties who submitted comments on the decision, to the fact that an appeal may be lodged against the decision in terms of the National Appeals Regulations.

3 OBJECTIVES AND CONTENTS OF ENVIRONMENTAL AUDIT REPORT

The EAR is focussed on compliance with measures and conditions of the:

- Environmental Impact Assessment Report and **Environmental Management Programme Report** for the Ventersburg Gold Mine. September 2017. DMRE reference FS 30/5/1/2/2/1036 MR.
- **Integrated Environmental Authorisation** issued to Gold One Africa Ltd on 9 January 2018 in terms of the NEMA as amended, the EIA Regulations, 2014, and the National Environmental Management: Waste Act Regulations, 2013.

3.1 Objectives

In terms of Appendix 7 of the NEMA EIA Regulations (2014), the EAR must provide for recommendations regarding the need to amend the EMPr. The objectives of the EAR are to –

- Report on the level of compliance with the conditions of the EA and the EMPr, and the extent to which the avoidance, management and mitigation measures provided for in the EMPr achieve the objectives and outcomes of the EMPr
- Identify and assess any new impacts and risks
- Evaluate the effectiveness of the EMPr
- Identify shortcomings in the EMPr, and
- Identify the need for any changes to the measures provided for in the EMPr.

3.2 Content

Table 1 outlines the required information to be provided in an EAR as per Appendix 7 of the EIA Regulations.

3.3 Frequency of reporting

According to Regulation 34 of the NEMA EIA Regulations (2014), the environmental audit must be conducted and submitted to the CA at intervals as indicated in the EA. The Ventersburg Gold Mine EA requires that an EAR be compiled by an independent specialist and submitted to the DMRE on an annual basis, as required in terms of Section 24Q of the NEMA.

3.4 Period applicable to this assessment

No previous EARs have been compiled for the Project. The audit review period for this assessment is January 2018 (from issuing of Environmental Authorisation) to November 2021.

4 METHODOLOGY

4.1 Audit team

Prime Resources (Pty) Ltd is a specialist environmental consulting firm providing environmental, social, and related services, which was established in 2003. Prime Resources was founded by Peter Theron (PrEng, SAImm), the Managing Director and Principal Environmental Consultant of the firm. Peter has a GDE Environmental Engineering from the University of Witwatersrand and over 30 years' experience in the field of environmental science and engineering.

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Professional Affiliations	ECSA, SACNASP, SAImm, IAIAAsa, EAPASA

Relevant details of the audit team are provided in Table 2 and declarations of independence are provided in Appendix A.

Table 2. Details and expertise of audit team

Auditor	Gené Main	Stephen Tarlton
Role	Principle Consultant, author	Senior Environmental Scientist, review
Qualifications	BSc Hons (Environmental Science) MSc (Botany)	BSc Hons (Environmental and Plant Science) MSc (Botany)
Affiliations	Pr.Sci.Nat. (Env. Sci.) No. 400370 EAPASA Registered, No. 1257 IAIAAsa Membership No. 5932	Pr.Sci.Nat. (Env. Sci.) No. 115011
Experience	14 years	10 years

4.2 Site visit

A physical site inspection was undertaken on 24 and 25 August 2021 by Gené Main and Stephen Tarlton from Prime Resources, as part of a water monitoring exercise conducted in terms of the WUL. Photographs from the site visit are included in Section 5.3. At the time of conducting the audit, the project had not yet commenced with construction (Photos 1 and 2), but representatives from Gold One Africa have confirmed that exploration activities have recently recommenced on site.

4.3 Consultation and comments

No consultation with Interested and Affected Parties (IAPs) was undertaken during the process of compiling this audit report. No comments were therefore received from IAPs for inclusion in the report. The CA has not requested any specific information to be included in the report.

4.4 Compliance assessment and scoring

The following was used as a procedure for the compliance assessment:

- Creation of a checklist of all commitments and conditions indicated in the EMPr and EA

- Consideration of compliance with the commitments and conditions
- Interviews with mine personnel where necessary to confirm the assessment.

Compliance scoring methodology is indicated in Table 3. All conditions and commitments are valued equally; no weighting has been taken into account. It should be noted that because the project was still in its pre-construction phase, very few management measures and conditions were applicable, effectively assessed, and scored.

Assessment of compliance with the EMPr is addressed in Table 4 to Table 18.

Assessment of compliance with the EA conditions is addressed in Table 19 and Table 20.

Table 3. Compliance scores used for the environmental audit

Criteria	Scoring
Compliant	2
Partially compliant	1
Non-compliant	0
Not applicable / Noted	-

4.5 Assumptions, uncertainties, and gaps in knowledge

- The findings recorded in this report are limited to the timeframe during which the audit was undertaken.
- Site layout amendments were identified prior to the audit taking place, however, since an amended EMPr has not yet been submitted or approved for the Project, this EAR is based on the approved EMPr (September 2017), and EA granted in January 2018.
- No monitoring of environmental conditions was undertaken for this audit.

4.6 Disclaimer

Prime Resources has expressed due and diligent care to comprehensively evaluate the compliance of activities and operations with the approved EMPr and EA, for the period under review. It is noted, however, that the audit relies on findings made at a single site inspection, which is undertaken on a sample basis only, substantiated with information supplied by the EA Holder. It is assumed that all data provided by the EA Holder is true and correct. It is acknowledged that areas of partial and/or non-compliances may not have been observed during the site inspection or did not come to light from a review of the data provided.

5 AUDIT FINDINGS

5.1 EMPr management and mitigation measures

The full set of commitments included in the 2017 EMPr are provided in Table 4 to Table 18.

Table 4. Air quality management measures

Management measure	Comment	Compliance
Construction, operation, and decommissioning		
Mine health and safety requirements in terms of air quality within the boundaries of the proposed development must be adhered to and compliance thereto audited regularly.	Not applicable. Construction has not yet commenced.	-
Speed of construction vehicles and haul trucks travelling on unpaved roads must be limited to 40 km/h.		-
Dust suppression through watering must be implemented on unpaved access and on site roads.		-
An inspection and maintenance programme to service equipment in accordance with the equipment manufacturer specifications must be implemented.		-
Low sulphur diesel must be used to fuel vehicles and equipment.		-
Vehicle idling must be limited.		-
Air quality monitoring must be conducted as per the Air Quality Monitoring Programme.	Not applicable. Monitoring should commence at least one year prior to the construction phase to allow for the collection of a baseline ambient air quality data set. Timeframes for construction must be confirmed and monitoring planned.	-
Any complaints relating to dust must be recorded and additional management measures must be investigated to address these if monitoring indicates exceedances in the standards.	Not applicable. Construction has not yet commenced.	-
Construction		
Access tracks used for soil stripping during the loading and unloading cycle must be watered.	Not applicable. Vegetation clearing, earth moving activities, site vehicle operation and the installation (or operation) of generators have not yet commenced. A weather station is required to be installed on site prior to construction. Timeframes for construction must be confirmed and the installation of the weather station must be planned.	-
Soil stripping must be limited to areas required for the construction of surface infrastructure.		
Free fall height during topsoil stockpiling must be limited to 3 m.		
A water spray dust suppression system must be implemented during earthmoving and dozing operations. Excavation area to be hosed down prior to removal of material.		
Earthmoving activities must be phased to reduce the source area (i.e. limit the total exposed area at one time).		
Frequency of disturbance of exposed areas must be reduced.		
Use of chemical dust suppressants and wind breaks must be implemented prior to re-vegetation.		
Exposed areas must be re-vegetated as soon as possible.		
Development of access roads must be limited and the locations clearly defined as per the project layout.		
The existing portion of the access road must be paved.		
Establish a meteorological station to monitor wind speed and wind direction to assist in analysing monitoring air		

Management measure	Comment	Compliance
quality data.		
Pollution abatement equipment must be installed at the smelter and laboratory furnace stacks which must be maintained and utilised continuously.	Not applicable. Construction has not yet commenced; facilities such as the smelter and laboratory eluate tank and acid treatment plant have not been installed.	-
Pollution abatement equipment must be installed at the eluate tank emission source to reduce the NH ₃ emissions, and at the acid treatment plant emission source to reduce the NO _x (expressed as NO ₂) emissions to ensure that the minimum emission standards are met at source.		-
Operation		
Vegetation or cladding of stockpiles must be implemented to reduce wind erosion.	Not applicable. The operational phase has not commenced.	-
Housing of crushers, screens, conveyors must be implemented.		
Pollution abatement equipment must be maintained and utilised continuously.		
Reduction of extent of bare areas of the TSF through progressive vegetation of the side slopes during operations.		
Introduction of wind-breaks on the edges of the TSF.		
Spraying along the slopes and on the surface of the TSF.		
Progress reporting must take place at regular intervals (at least annually) during operations. Monitoring results and a summary of any complaints relating to air quality received must be combined to determine if monitoring objectives (as per relevant standards and as stipulated in the AEL) are being met. Progress in terms of air quality management should be reported to all interested and affected parties, including authorities and persons who may be affected by emissions. Corrective action must be taken (i.e. the implementation of contingency measures) in the event that monitoring objectives have not been met.		
As per the requirements of the National Emission Reporting Regulations (GN283 of 2015) the Applicant is to register as a data provider with- and also submit emission reports, in the format required, to the online National Atmospheric Emissions Inventory System (NAEIS). Reports must be submitted for the preceding calendar year to the NAEIS by 31 March for each calendar year.		
Decommissioning		
The area must be fully rehabilitated and vegetation must be self-sustaining as per the Closure Plan to prevent bare areas which are susceptible to wind erosion.	Not applicable. Revegetation activities associated with decommissioning and closure have not commenced.	-

Table 5. Archaeology and palaeontology management measures

Management measure	Comment	Compliance
Prior to construction		
<p>As part of environmental awareness training during induction, personnel and contractors must be educated regarding the possible presence of subterranean archaeological and/or paleontological sites, features or artefacts and be advised of the penalties associated with the unlawful removal of these artefacts, as set out in the NHRA as well as of the chance finds procedure.</p>	<p>Not applicable. Awareness training has not commenced. However, relevant archaeological training material must be compiled and put in place prior to construction.</p>	-
Construction		
<p>Known cultural sites should be clearly marked in order that they can be avoided during construction activities.</p>	<p>Not applicable. No earthworks have commenced.</p>	-
<p>Known cultural sites should be isolated, e.g. by fencing them off. All construction workers should be informed that these are no-go areas, unless accompanied by the ECO.</p>		
<p>In areas where the vegetation is threatening the heritage sites, e.g. growing trees pushing walls over, it should be removed, but only after permission for the methods proposed has been granted by SAHRA. A heritage official should be part of the team executing these measures.</p>		
<p>Maintain a buffer zone of 100 m between mining activities and sites identified.</p>	<p>Not applicable. No earthworks have commenced.</p>	-
<p>If any buried archaeological or palaeontological findings are discovered during excavation activities, the excavation must stop and the ECO must be notified immediately. The ECO must then contact SAHRA to investigate the findings.</p>		
<p>The ECO must inform the SAHRA and contact an archaeologist and/or palaeontologist, depending on the nature of the find, to assess the importance and rescue them if necessary (with the relevant SAHRA permit). No work may be resumed in this area without the permission from the ECO and SAHRA. Under no circumstances shall any artefacts be removed, destroyed or interfered with.</p>		
<p>If the newly discovered heritage resource is considered significant a Phase 2 assessment may be required. A permit from the responsible heritage authority will be needed.</p>		
<p>Any mitigation or management measures recommended by the specialist, after assessment of the find, must be implemented.</p>		

Table 6. Biodiversity management measures

Management measure	Comment	Compliance
Prior to construction		
Appoint a botanist to survey the footprint during summer, at least a month after adequate rainfall, for floral species of conservation concern and alien invasive species requiring control.	Not applicable. Construction has not yet commenced. Construction timeframes must be confirmed along with the relevant activities and documentation planned, including undertaking a summer botanical survey, obtaining relocation permits, compiling a fire management plan, and preparing for the establishment of a nursery.	-
Obtain relocation permits for any plant species of conservation concern to be impacted (possibly <i>Nerine sp.</i> , geophytic species such as <i>Gladiolus</i> , <i>Bulbines</i> , <i>Hypoxis hemerocallidea</i> and <i>Boophone</i>) from DESTEA based on the findings of the survey.		-
Compile a fire management plan.		-
A nursery must be set up to propagate indigenous grass species to be used to rehabilitate the disturbed area to grazing land post closure.		-
Appoint a botanist to compile an alien invasive species monitoring and eradication plan for alien and invasive species present on site requiring control (possibly <i>Cirsium vulgare</i> (Savi) Ten., <i>Pyracantha cf coccinea</i> M.Roem., <i>Tamarix chinensis</i> Lour., <i>Verbena bonariensis</i> L. and <i>Xanthium spinosum</i> L.) based on the findings of the survey and submit the plan to DESTEA for approval.	Partially compliant. An invasive species control plan has been developed in for the site (submitted in support of the WULA.) This plan should be submitted to DESTEA for approval.	PC
Construction		
Vegetation clearing should be limited to designated mining areas as per the approved layout.	Not applicable. The construction and operational phases have not commenced. A survey must be undertaken prior to site establishment to identify species of conservation concern and to take appropriate action for their rescue / relocation.	-
Any sensitive areas (mainly wetland habitats in this project) should be demarcated and avoided by all personnel. This includes areas outside of the infrastructural footprint. No access via vehicle or by foot within these areas.		
Demarcate and fence in the construction site.		
Demarcate all areas for stockpiling.		
Limit construction / decommissioning activities to day time.		
Appoint a botanist to supervise the relocation of floral species of conservation concern.		
If found within the footprint during the construction period, relocate conservation important fauna (notably the potentially occurring White-tailed Rat, Striped Harlequin Snake, Leopard Tortoise and Giant Bullfrog) from the construction footprint with advice from an appropriate specialist.		
Check open trenches daily during construction for trapped animals and release these animals unharmed.	Not applicable. Construction has not yet commenced.	-
Alien invasive plant species monitoring must be conducted as per the Biodiversity Monitoring Programme.		
The use of herbicides is not recommended and all alien plant species should be removed mechanically.	Not applicable. Construction has not yet commenced.	-
Rehabilitation must take place at the end of construction at initial disturbed areas along the pipeline route and potentially at the pipeline discharge point.		
Construction and operation		
Environmental awareness training must be implemented as per the environmental awareness plan educating personnel and contractors on how to interact with the environment.	Not applicable. Awareness training has not commenced. However, relevant training material must be compiled and put in place prior to construction.	-
An incentive reporting programme on violations should be implemented. This will also apply to employees and communities to dissuade from disturbing, collecting or poaching fauna.		-
Hydrocarbons must be managed according to the Hydrocarbon Management Plan to avoid contamination of the environment.	Not applicable. Construction has not yet commenced.	-
Speed limits must be enforced.		-

Management measure	Comment	Compliance
Alien invasive vegetation eradication and monitoring must be conducted throughout the construction and operation phases as detailed in the Biodiversity Monitoring Programme.		-
Implement the fire management plan.		-
The pipeline discharge point and associated flow attenuation structures should be fenced to prevent direct access of game and other wildlife to the discharge water.		-
Decommissioning		
Environmental awareness training must be implemented as per the environmental awareness plan educating contractors on the measures in this plan giving an indication on how to interact with the environment.	Not applicable. Decommissioning has not yet commenced.	-
Alien invasive vegetation eradication and monitoring must be conducted throughout the decommissioning phase as detailed in Biodiversity Monitoring Programme.		
Rehabilitation must be carried out according to the Closure Plan.	Not applicable. Rehabilitation has not yet commenced.	-
Post-closure		
Alien invasive vegetation eradication and monitoring must continue post-closure as per the Biodiversity Monitoring Programme.	Not applicable. Post-closure phase has not commenced.	-
The recovery of vegetation must be monitored as per the Biodiversity Monitoring Programme.		

Table 7. Blasting and subsidence management measures

Management measure	Comment	Compliance
Prior to construction		
A blasting engineer must conduct a survey of the surrounding surface infrastructure which may be impacted by surface blasting activities, during which any existing structural damage must also be documented. The survey will be dependent on the blasting design / programme.	Not applicable. Construction has not commenced. However, construction timeframes must be confirmed, and appropriate plans made to conduct the structural survey prior to blasting.	-
<p>The blast design should be compiled to ensure that:</p> <ul style="list-style-type: none"> • Ground vibrations do not exceed 12.7 mm/s at any surrounding structures to limit the risk of cosmetic or more serious damage. • Ground vibrations at surrounding occupied areas must preferably be kept beneath the levels expected to be unpleasant and definitely be kept beneath the levels expected to be intolerable. The frequency and vibration considered unpleasant are 0.75 in/sec and 19.1 mm/s and those which are considered intolerable are 2.00 in/sec and 50.8 mm/s. • Air blast levels generated from blasting operations are kept below 120 dB to keep disturbance to surrounding residents to a minimum and ensure that no damage to structures occurs. • Proper stemming control must be implemented to limit the generation of fly-rock. 	Not applicable. Construction has not yet commenced.	-
Construction		
As far as possible limit blasting activities to daylight hours.	Not applicable. Construction has not yet commenced.	-
Blasting must be avoided during periods of strong winds.		-
The residents within the area which may be impacted must be notified of planned blasting activities.		-
All people and livestock must be cleared within a radius of at least 500 m from a blast.		-
The setting-out and drilling of all blast-holes must be properly supervised to ensure proper distribution of explosives through the blast.		-
All blast-holes must be timed with detonators fitted with sufficiently accurate delays in order to ensure that the blast design is complied with.		-
Complaints from surrounding residents regarding structural damage must be investigated, informed by the baseline survey undertaken prior to blasting. Should it be determined that structural damage has occurred as a result of blasting activities the person affected should be adequately compensated and the blast design updated to prevent further structural damage.		-
Complaints from surrounding residents regarding nuisance must be investigated, informed by seismic monitoring. Should it be determined that blasting activities are resulting complaints, the blast design must be updated to prevent further nuisance.		-

Table 8. Noise management measures

Management measure	Comment	Compliance
Construction and decommissioning		
As far as possible limit construction and decommissioning activities to daylight hours.	Not applicable. Construction has not yet commenced.	-
Construction, operation, and decommissioning		
Limit idling and switch off equipment when not in use.	Not applicable. Construction has not yet commenced. Machinery has not yet been mobilised to site. Noise related aspects are not presently relevant, and no noise related grievances can be expected.	-
Enclose engine compartments of vehicles.		-
Damp mechanical vibrations of vehicles and equipment.		-
Properly design and maintain silencers on diesel-powered vehicles and equipment.		-
Implement systematic maintenance of all forms of equipment and vehicles.		-
Fixed noise producing sources such as generators, pump stations to be either housed in enclosures or barriers put up around the noise source. The barriers should be installed between the noise source and sensitive noise receptor, as close to the noise source as possible. Any noise barrier should be at least as tall as the line-of-sight between the noise source and the receptor, plus 30%.		-
A grievance mechanism should be introduced whereby noise complaints can be received and responded to. Any complaints relating to noise must be recorded and the ECO must respond to complaints appropriately in a timeous manner. If necessary, further monitoring must be conducted and corrective measures investigated and implemented.		-
Standardised noise measurements must be carried out on individual equipment at delivery to site to construct a reference database. Regular checks must be carried out to ensure that equipment is not deteriorating and to detect increases which could lead to increase in the noise impact over time.		-
Monitoring must be conducted as detailed in the Noise Monitoring Programme.		-
A report must be compiled quarterly/ bi-annual, depending on the intervals of the monitoring programme then submitted to management to ascertain compliance with the required standards.		-
Mine Health and Safety and Occupational Health and Safety Regulations relevant to noise management must also be adhered to within site boundaries and compliance audited regularly.		-

Table 9. Radiation management measures

Management measure	Comment	Compliance
Prior to construction		
Baseline radiological data will have to be collected before mining commences in respect of surface and groundwater, nearby river and stream sediments, ambient radon concentrations and the radioactivity of airborne dust to inform a baseline study. The baseline study will be used as reference values for closure and rehabilitation and be required for NNR regulatory purposes. The baseline study, which includes measuring seasonal variations of radioactivity in media, should start at least two years before mining commences.	Not applicable. However, timeframes for construction must be confirmed and appropriate plans made to ensure that additional radiological data is collected prior to construction. Note that this should commence at least two years before mining commences. In parallel, a comprehensive application must be prepared and submitted to the NNR prior to mining occurring.	-
A comprehensive submission must be made to the NNR for a Certificate of Registration before mining can commence. The preparation of a submission to the NNR is a lengthy process and should therefore start well advance, allowing approximately two years before mining commences.		-
Construction, operation, and decommissioning		
Dust suppression measures as per the Air Quality Management Plan must be implemented to reduce radiation exposure as a result of dust.	Not applicable. Construction has not yet commenced.	-
Excess water to be discharged should be treated to ensure that the radiological quality of the treated water is the same or better than the existing water quality in the Rietspruit.		
Implement monitoring as per the Radiation Monitoring Programme to ensure that the radiation dose to the public meets regulatory requirements.		
The TSF and WRD areas should be fenced off to prevent public access to these areas.		
Decommissioning		
To ensure compliance with the radiation dose constraint post closure, the recommendations to minimise radiation exposure in the Closure Plan must be adhered to.	Not applicable. Decommissioning has not yet commenced.	-

Table 10. Socio-economic management measures

Management measure	Comment	Compliance
Prior to construction		
A timeframe for expected communications to be held between Gold One and affected landowners where surface infrastructure will be located (regarding the potential establishment of the mine) must be provided to landowners as soon as possible.	Not applicable. Discussions have been held with landowners with regard to the location of surface infrastructure. Prior to construction occurring, agreements must be finalised.	-
Prior to an agreement being drawn up for the purchase or lease of the affected land, the extent and size of land that would be available to Mr Vogel for farming, should the scenario whereby Mr Vogel remains on the property and continues farming in conjunction with mining activities must be fully clarified with him so that he can accurately determine the viability of farming due to the loss of available land during mining, permanent loss of land where the TSF and WRD are to remain on surface as well as the loss of land capability and agricultural potential in rehabilitated areas post-closure.		-
Agreements must be drawn up between Gold One and affected landowners for the use of the land (taking into account the farmworkers and the potential impacts of the mine on farmworkers residing on the farm).		-
Livelihood restoration must be considered for the farmworkers if there is a reduced workforce due to reduced area to be farmed or retrenchment of farmworkers due to the sale of the land as part of the agreement with the landowner. Possible referrals to other farmers in the vicinity could be investigated.	Not applicable. Livelihood restoration opportunities must be investigated and finalised prior to construction.	-
A stakeholder engagement plan (including a grievance mechanism), to provide a defined process for two-way communication between the community and the Mine must be compiled. The grievance mechanism must prescribe methods for community members to raise complaints (anonymously if they so choose). Complaints must be responded to and addressed effectively. Response methods and timeframes must be specified in the grievance mechanism. IAPs must be notified of the stakeholder engagement plan and grievance mechanism.	Not applicable. A stakeholder engagement plan with a grievance mechanism must be compiled and implemented prior to mobilisation and construction.	-
Local engagement structures must be put in place to disseminate accurate information about the project to reduce unrealistic expectations regarding jobs and community benefits, discuss potential impacts and issues relating to the mine including local procurement and recruitment, crime, any complaints received as well as potential health concerns. Minutes of meetings should be taken and kept for the LoM.	Not applicable. Timeframes for construction must be confirmed. Recruitment and procurement policies and procedures must be compiled prior to construction.	-
A local procurement policy document that addresses the procurement requirements and procedures must be compiled. Copies of the policy must be placed in key localities in each of the receptor communities (Phomolong, Hennenman, Whites and Ventersburg). The available local suppliers as well as their capacity must be evaluated and local suppliers must be preferred where there is local capacity to provide services.		-
A clearly defined recruitment process and registration process for local recruitment must be implemented. The registration process should involve the compilation of a database of people from local communities interested in employment to inform a skills database and identify skills gaps. Local recruitment must be preferred where the necessary skills are available locally.		-
Compilation of an in-migration management plan based on input from the social audit and discussions through local engagement structures. These impacts will be difficult to manage and will require a collaborative effort between Gold One and the MLM. The role of the MLM in the management of Phomolong Informal Extension should be defined and clarified.		Not applicable. Timeframes for construction must be confirmed and an in-migration management plan must be compiled (with the input of the local municipality) and implemented prior to construction.

Management measure	Comment	Compliance
A social buffer zone must be fenced. A 500 m buffer (physical fenced boundary) from blasting activities is recommended.	Not applicable. Construction has not yet commenced.	-
The housing of construction contractors in the surrounding communities of Hennenman, Virginia and Welkom should be preferred over the establishment of a construction camp on site. To accommodate this, a system could be implemented where contractors are bussed to and from site.	Not applicable. Construction has not yet commenced. However, existing, local accommodation for employees and contractors must be considered prior to construction.	-
Construction, operation, and decommissioning		
The physical fenced boundary of the social buffer must be inspected daily to ensure that no people or livestock enter the buffer zone.	Not applicable. The construction, operational and decommissioning phases have not yet commenced. Relevant materials must however be put in place prior to construction to ensure an adequate complaints procedure, health awareness programmes, procedures for reporting illegal mining, ongoing communication and good relationships with communities.	-
Any complaints received regarding the mine must be addressed adequately through the grievance mechanism and corrective measures implemented where warranted.		-
Implement employee and community awareness campaigns regarding the spread of HIV/AIDS.		-
Implement an employee TB management programme to prevent the spread of TB in the community as a result of mine employees.		-
A system could be created where illegal mining could be reported and the person could remain anonymous. Management of illegal mining will be the responsibility of the security division at the mine, which must use specialist knowledge to address the impact should it occur.		-
Gold One must maintain good relationships as well as transparent and two-way communications with employees and workers' organisations to ensure that strike action is avoided where possible. An HR Officer must be based at the site to continuously engage with the employees.		-
Gold One must maintain good relationships as well as transparent and two-way communications with IAPs through local engagement structures to ensure that protest action is avoided where possible.		-

Table 11. Soil management measures

Management measure	Comment	Compliance
Construction and operation		
Vegetation and soil must be retained in position for as long as possible and removed immediately ahead of construction / earthworks in that area to avoid erosion.	Not applicable. Vegetation clearing, soil stripping and grubbing has not commenced for the construction activities.	-
Topsoil stripping must be undertaken as follows: <ul style="list-style-type: none"> • Topsoil within the uncultivated grazing area is approximately 30 cm deep. • Topsoil within the cultivated area is approximately 50 – 80 cm deep. • Topsoil and subsoil should be stripped prior to excavation and construction. The infrastructure areas that need to be stripped are the TSF, the processing plant and WRD. • Each soil type and soil horizon should be stripped and stored separately. • Soils should be stripped and placed when dry as handling of wet soils increases the compaction/ loss of soil structure. • Stripping by means of excavator buckets, and loading on dump trucks, is preferable to stripping and loading by means of bowl-scrapers. Topsoil and subsoil stripping and stockpiling for future rehabilitation purposes must be conducted correctly under qualified supervision.		-
Limit stockpiling activities to day time and dry weather.		-
Commence (and preferably complete) construction / stockpiling / decommissioning during winter.		-
Topsoil stockpiling must be undertaken as follows: <ul style="list-style-type: none"> • Soils should be stockpiled preferably according to soil type and natural horizon sequence (Dark clayey soil should not be mixed with the yellow and red topsoil). • The topsoil / subsoil stockpiles should be relocated to a free draining, flat area where erosion and contamination of the stockpile will not occur. • Live management and placement of topsoil should be implemented where possible to improve the organic content of the soils. Fertility levels must be maintained through fertilisation and to curb topsoil loss as much as possible. Any topsoil that is to be stockpiled for future use must be stored at a minimum height to retain the viability of the seed bank. Remove the top 100mm of topsoil and stockpile in small mounds, where possible. The recommended depth of removal is between 100–200 mm of topsoil as this contains the indigenous seed bank (only within natural areas that have been cleared. This is also applicable to the pipeline route. Stockpiling should occur for the shortest possible time to minimize propagule death.		-
Restrict the height of the topsoil stockpiles to 4 m so as to avoid damage to the soil seed bank and to reduce compaction of the soils.		-
The stockpile side slopes should be stabilised at a slope of 1:3. This will promote vegetation growth and reduce run-off related erosion. Locally adapted perennial or annual seed mixtures of grasses should be used for rehabilitation.		-
Once stockpiled, indigenous grass cover should be implemented (either through natural propagation if the seed bank is sufficient or through seeding) as soon as possible and should remain covered until required for rehabilitation.		-
Equipment, human and animal movement on the soil stockpiles should be limited to avoid compaction and soil damage to the soils and seed bank.		-

Management measure	Comment	Compliance
If soil is contaminated, measures as described in the Hydrocarbon Management Plan must be implemented.		-
The first management priority is to treat the pollution by means of in situ bioremediation. The acceptability of this option must be verified by an appropriate soils expert on a case by case basis, before it is implemented. If remediation is not possible, the contaminated soil should be excavated and removed from site, handled accordingly and discarded as potentially hazardous waste.		-
Annual soil contamination assessments should be carried out as per the Soil Monitoring Programme.		-
Stormwater management measures must be put in place according to the Water Management Plan to attenuate stormwater volumes and decrease velocity.		-
Exposed (bare) areas should be stabilized with vegetation and/or erosion control blankets. Establishing and maintaining vegetation as a soil cover is the most common practical technique for controlling erosion on disturbed soils. Water flow inhibiting grasses such as Vetiver or biodegradable Jute mesh erosion control blanket should be established on undeveloped (open) areas and along the lower ends of the site, in order to retard overland water flow and erosion. These are suitable for short to medium term erosion protection. The effect of the Jute mesh can be enhanced by putting it over a loose blanket of thatching grass or reeds, if locally available. A 70 % dead grass or reed cover will slow down flow, minimise wind erosion and suppress weed growth. The open weave nature of the Jute mesh blankets helps retard water flow velocity, while allowing sunlight infiltration to encourage vegetation growth. Alternatively, strips of instant turf can be planted a few meters apart during spring or late summer, with tuft runner grasses in between.		-
Erosion control of all banks, including the existing eroded drainage channels, must take place so as to reduce erosion and sedimentation. Eroding embankments need to be sloped to a gradient of not more than 1:3 and appropriately re-vegetated. Cleared bush and brush can be used for backfill in the existing eroded drainage channels.		-
All areas susceptible to erosion (including roads, bare areas and drainage channels) must be monitored as per the Soil Monitoring Programme.		-
Areas where vegetation has not been cleared within the surface infrastructure area should be mowed.		-
Decommissioning		
A representative sample of the stockpiled soils must be analysed prior to rehabilitation as per the Soil Monitoring Programme.	Not applicable. The closure and decommissioning phases have not commenced	-
Refer to the Closure Plan, detailing the rehabilitation management measures.		-
Re-vegetation must be carried out according to the Closure Plan and must include the implementation of soil saver and hydro seeding on the TSF. Pollution control facilities will be left in place post-closure.		-
Post-closure		
Monitor the recovery of vegetation following rehabilitation according to the Biodiversity Monitoring Programme.	Not applicable. Presently, there are no rehabilitated areas that require monitoring.	-
All areas susceptible to erosion must be monitored as per the Soil Monitoring Programme.		-

Table 12. Traffic management measures

Management measure	Comment	Compliance	
Prior to construction			
Detailed designs must be compiled for the recommended intersection upgrades taking into account the pavement layer attributes. Detailed investigations should be conducted in conjunction with the relevant road authority (the Free State Department of Police, Roads and Transport) in terms of the existing quality and potential life span of the existing road surface layers of the road.	Not applicable. Construction has not commenced. Gold One must bear in mind the requirements for intersection and road upgrades, which should be designed in conjunction with the road authorities.	-	
Ensure that the necessary approval has been obtained for the intersection upgrades from relevant road authority prior to construction and in consultation with a design engineer.		-	
The mine must come up with a road maintenance plan for the section of the R70 affected by the development in collaboration with the relevant road authority.		-	
Construction			
The existing farm access to be used as the mine access road must be paved. Should farming activities continue, access from the proposed mine access road will need to be provided to the farm.	Not applicable. Construction has not commenced. Gold One must bear in mind the requirements for road and intersection upgrades, as well as relevant pedestrian crossings.	-	
The following access intersection upgrades are recommended (refer to Figure 5): <ul style="list-style-type: none"> • 120m dedicated left-turn slip lane on western approach of Road R70. • 90m dedicated right-turn lane on eastern approach of Road R70. • 60m left-turn low angle slip lane on southern approach. • 120m acceleration lane towards east of Road R70. • Reflective road studs (LED if possible) to ensure visibility at night. • Update road markings (highway paint recommended). • Provide additional road traffic signs. 		-	
The following upgrades are recommended: <ul style="list-style-type: none"> • Update road markings (highway paint recommended). • Provide reflective road studs (LED if possible). • Provide additional road traffic signs. 		-	
Loading and off-loading bays should be provided as close as possible to mine access road along Road R70 where workers and visitors can be loaded and off-loaded should public transport not enter the proposed access road of the proposed mining development.		-	
Speed limit signs should be erected along the relevant section of Road R70. The speed limit should be limited to 80 km/h at the proposed access point		-	
Pedestrian crossings should be provided at the Phomolong and access road intersections (road markings and signs). Road traffic warning signs should be provided to warn motorists of the possibility of pedestrians.		-	
Construction, operation, and decommissioning			
The mine in collaboration with the relevant road authority must maintain the R70 in proximity to the mine access road.		Not applicable. Construction has not yet commenced. Ongoing maintenance will form part of the commitments for operation.	-
Re-marking of road markings as and when required.			-
Continuous evaluation of the condition of road traffic signs and replacement when required.	-		
Continuous maintenance of fencing of the mine property along the R70.	-		
Trim vegetation at intersections to ensure visibility.	-		
It is recommended that a dedicated loading and off-loading area should be provided for public transport close to	-		

Management measure	Comment	Compliance
the operational area of the proposed mining development where workers can be loaded and off-loaded in a safe environment. Walkways should be provided at strategic points.		
Evaluate the access intersection, Phomolong intersection and section of the R70 in the vicinity of the mine on a regular basis based on a risk and safety management process to determine if increased accidents are occurring as a result of the mine and implement additional road safety measures where required. Changes in pedestrian movements should also be noted.		-
Awareness training must be implemented as per the environmental awareness plan educating contractors and employees of the importance of road safety. Road safety and awareness campaigns should be run at the mine.		-
Reflective clothing can be provided to workers.		-
Community awareness training must be implemented educating the members of the Phomolong community of the importance of road safety.		-
The speed limit should be limited to 80 km/h at the proposed access point and enforced by the relevant road authority for the relevant section.		-
Limit road use at night.		-
Signpost the main access road/s and all no entry roads.		-



Figure 5. Required upgrades to the R70 and mine access intersection

Table 13. Visual management measures

Management measure	Comment	Compliance
Construction		
The extent of the areas to be disturbed must be limited in area to only that which is essential as per the approved layout	Not applicable. Construction has not yet commenced.	-
Avoid the unnecessary removal of vegetation, especially the existing row of trees along the border with the R70 where these partially or totally screen infrastructure.		
Make use of the space between sensitive visual receptors and the mine to create a visual buffer. Establish a hedge of fast-growing trees (indigenous) along the project boundary and around infrastructure and roads at the beginning of the construction phase. Trees and vegetation planted on berms and at various distances will greatly reduce the visual impact of infrastructure.	Not applicable. Construction has not yet commenced. However, once construction timeframes are known, screening commitments such as planting of trees must commence as soon as possible.	-
To lessen the visual intrusion, mine infrastructure must be camouflaged i.e. painting it a colour to allow it blend in with the landscape as much as possible. The colour is to be carefully selected, and to be in the dark grey, brown or green range, to minimise visibility and avoid reflectivity.	Not applicable. The construction of visually intrusive structures has not commenced.	-
It is suggested that surface blasting during construction should be done at a time when visual receptors are least likely to be in the vicinity. This is most likely to be during midday in the working week, when the morning and afternoon rush of traffic along the R70 are low, and when most people are at work.	Not applicable. Construction has not yet commenced.	-
Construction, operation, and decommissioning		
The dust suppression measures as per the Air Quality Management Plan must be implemented.	Not applicable. Construction, operational decommissioning activities have not commenced, therefore dust and artificial lighting are not a concern.	-
Make use of Low Pressure Sodium lighting or other types of low impact lighting.		-
Low wattage bulbs can be used to further reduce the impact.		-
Avoid unnecessary illumination.		-
Provide lights with cover fittings that limit lateral and upwards "light spill", and position lights to shine towards the intended areas of illumination rather than using floodlights.		-
Limit the heights at which lights are positioned where possible will reduce "light spill".		-
Motion sensor activated lighting may be used instead of lights that illuminate continuously.		-
Decommissioning		
Completely remove all structures other than the WRD and TSF and associated pollution control infrastructure.	Not applicable. The closure and decommissioning phases have not commenced.	-
Rehabilitate all disturbed areas to reduce visual impacts as per the recommendations in the Closure Plan.		-

Table 14. Water management measures

Management measure	Comment	Compliance
Prior to construction		
Ensure that the WUL has been awarded prior to the commencement of construction for all applicable water uses.	Compliant. The project has been awarded a Water Use Licence.	2
No development of activities should take place within 500 m of watercourses prior to being authorised as part of the WUL or within 100 m of watercourses prior to an exemption being granted in terms of GN704 of 1999.	Not applicable. Site development has not taken place. The development of the discharge pipeline has however been authorised to take place within 500 m of the Rietspruit.	-
It is recommended that no mining or mining related infrastructure development takes place within the delineated wetland areas and the associated buffer zones. It is further recommended that a buffer zone of 50 m, 100 m and one of 500 m be assigned to the delineated wetland areas. The 50 m buffer zone should be designated as a no-go area. Should any mining or development of mining related infrastructure be undertaken within the 100 m buffer zone and exemption in terms of GN704 must be applied for prior to commencing with construction. Should any mining or development of mining related infrastructure be undertaken within the 500 m buffer zone, it should not commence prior to a WUL being awarded.		-
Clearly demarcate the wetland areas on the ground from the edge of the 100 m buffer zone and signpost them as sensitive ecological areas.	Not applicable. Site establishment has not yet taken place.	-
The design of the TSF must be in line with the GN704 requirements and progressive vegetation of the TSF with a self-sustaining vegetation cover should be implemented as it increases in height and the correct slope implemented to reduce wind erosion and water erosion.	Compliant. The TSF has been designed in line with GN704 and has been approved in the WUL.	2
Construction		
The wetland areas and drainage lines as well as a 50 m buffer zone must be avoided.	Not applicable. Construction activities have not yet commenced.	-
Ensure all construction material including heavy vehicles are stored at a single designated laydown area situated not only outside of the delineated wetland areas and their associated 100 m buffer but also the 1:100 year Rietspruit floodline.		-
Clearly demarcate (on the ground) the construction footprint area and strictly limit all construction activities to within this area.		-
Care must be taken so as to not disturb/destroy any conservation important biodiversity found near the Rietspruit. Species may include Southern African Vlei Rat, African White-tailed Rat, Serval, African Clawless Otter and Spotted-necked otters.		-
Care must be taken to not to walk or drive through dense stands of wetland vegetation particularly <i>Imperata cylindrica</i> so as not to disturb the conservation important African Grass Owl.		-
Construction (specifically in proximity to surface water resources i.e. the WRD and discharge pipeline) must be planned for winter (i.e. the dry months) in order to reduce the risk of floods and excessive sedimentation.		-
The clean and dirty water management system (including the PCD) is to be constructed at the commencement of construction activities; thereafter the water treatment facility (including the pipeline from the shaft to the discharge point in the Rietspruit for mine water) prior to the commencement of discharging activities, to ensure that any dewatered groundwater can be stored without causing any surface water pollution and treated prior to discharge.		-
All water dams must be lined according to DWS engineering design standards to prevent contaminated water from seeping into the local groundwater system. Designs of the dams must be done according to specifications and as-built drawings must be submitted to DWS.		-

Management measure	Comment	Compliance
Suitable flow diversion structures, such as diversion berms and/or collection canals, must be established around the border of the proposed operational areas so as to prevent substantial surface runoff contamination.		-
Minimise stripping of vegetation near the banks of the Rietspruit.		-
Silt traps must be placed down slope of vegetation stripping to minimise siltation of the Rietspruit. These silt traps need to be regularly maintained to ensure effective drainage. In order to limit the direct input of silt into the river via windblown sand and dust, all exposed surfaces should be stabilised once the covering vegetation has been removed.		-
Ensure that areas cleared for the construction of the pipeline and flow diffusing infrastructure are stabilised after construction to prevent erosion.		-
Topsoil stockpiles should not be placed/stored in the following areas: <ul style="list-style-type: none"> • Low-lying areas or where streams appear to originate (non-perennial; i.e. during the summer rainfall period), or surface water runoff occurs after intensive rainfall events; and • Wetlands and shallow natural pans where water may collect during the summer rainfall season. 		-
A low temporary earth berm must be constructed between the wetlands and the stockpiles. These berms would help to intercept flows with transported sediment and allow them to settle out. Berms need to be located between wetlands and any stockpiles that are upslope of wetlands.		-
Stormwater management measures, to attenuate stormwater volumes and decrease velocity, must be in place during vegetation clearing operations to prevent soil losses due to water erosion.		-
When preparing concrete for the struts keep in mind that mixing of concrete must under no circumstances take place within the permanent or seasonal zones of the wetland and should take place above plastic sheeting and bunded.		-
The recommended monitoring boreholes as per the Geohydrology Monitoring Programme must be drilled at the commencement of construction activities.		-
Construct the pipeline infrastructure above ground and ensure that there is free drainage for surface runoff and that game can cross over the pipeline.		-
Avoid the disturbance of the wetland soil profile. Where the wetland soil profile is disturbed ensure that all soil removed is carefully stockpiled and returned in the same order it was removed.		-
If conservation important plant species are in the direct removal area, they must be carefully transplanted to the surrounding area.		-
Ensure that trenches remain open for as brief a time as possible. Appropriately deal with ingress water into the trench by pumping and using sandbags to minimise erosion from overland flow.		-
Ensure if the service road crosses a delineated wetland or drainage feature that the appropriate culvert systems are installed and clearly marked.		-
The recommended discharge point (immediately upstream of the Whites Dam) must be utilised.		-
Flow dissipaters must be constructed at the discharge point outside of the wetland (170 m inland from the banks of the Rietspruit) to avoid potential erosion.		-
The discharge point should be landscaped to spread the water as wide as possible to allow the system to vlei out before the active channel of the Rietspruit.		-
Install gauging point at the discharge point to effectively monitor flows, keep diligent records		-
Prevent / reduce groundwater inflow into the shaft, through cementation/grouting of fractures/fissures (prior to shaft sinking and during shaft sinking).		-

Management measure	Comment	Compliance
In the unlikely event of groundwater inflow volumes into the shaft becoming unmanageable, two 215 mm diameter abstraction boreholes should be drilled on both sides of the shaft in close proximity to the water yielding features.		-
Ensure that the water treatment facility is operational to meet DWS water quality specifications before dewatering commences.		-
No uncontrolled discharges to any surface water resources must be permitted. Any discharge points need to be approved by the relevant authority (DWS).		-
The ore stockpile area, WRD and TSF should be lined as per legislative requirements		-
Construction and operation		
Ensure that the conditions of any awarded WUL are strictly adhered to.	Noted. The first WUL audit has been undertaken.	-
Ensure that all Best Management Guidelines as published by the DWS are adhered to.	Not applicable. Best Management Guidelines are considered to have been addressed during the design phase. This will become relevant for future designs.	-
The volumes pumped from the shaft should be recorded and reported as monthly totals.	Not applicable. Construction activities have not yet commenced.	-
During shaft sinking, increased inflows due to fractures/fissures should be noted, specifically depths and initial inflow volumes.		-
Excess groundwater must be pumped to the lined surface water storage facilities for re-use.		-
Ensure that water is allowed to move through the landscape freely and not be restricted by the pipeline.		-
The separation of clean and dirty areas practice must ensure that the dirty area is minimized as far as possible. The different dirty areas must also be separated by means of bunding so that the associated water can be contained in differentiated containment facilities.		-
Clean and dirty water separation infrastructure must be maintained to effectively collect/direct contaminated water to the PCDs.		-
Carry out inspections of valves and routine maintenance of any faulty valves.		-
Accidental contaminant spills (e.g. dam breaches) should be addressed immediately.		-
Runoff or any seepage water from the ore material should be captured in lined pollution control facilities.		-
Runoff should be diverted around the WRD and TSF through a system of berms/trenches. Water management measures should be introduced to manage extreme rainfall events within these diversion berms/trenches.		-
Toe seepage (predominantly expected to the west and north, flowing from a dedicated drainage system below the WRD, on top of the liner system) and rainfall runoff from the WRD sidewalls should be diverted to and captured in lined pollution control facilities.		-
The WRD will expand toward the south (and possibly to the east – dependant on the final design criteria), which is in the upward slope direction of the surface topography. It is advisable that surface water barriers (e.g. paddocks and diversion berms) be removed/flattened to the ground surface in the direction of expansion, and drains below the footprint be constructed, to allow any water collecting in the bottom of the WRD to freely flow as toe seepages.		-
The possibility should be investigated of installing additional internal drains (at higher elevations) in the TSF. This will lower the phreatic head and will allow the TSF to dry out quicker after closure.		-

Management measure	Comment	Compliance
Unexpected seepages around the TSF should be captured (e.g. through the installation of toe drains) and diverted to lined pollution control facilities.		-
If possible/practical sulphide reduction should be attempted during (or pre-treatment of) gold processing. It will be beneficial in the long-term if sulphur occur as sulphate-sulphur and not sulphide-sulphur in the tailings material. One option is the aeration of tailings to oxidise sulphides which will lower the acidification potential of the sulphides.		-
Cyanide destruction as part of the plant process should be investigated.		-
Water qualities must monitored prior to treatment and after treatment, prior to discharge. Refer to the Hydrology Monitoring Programme	Not applicable. Dewatering and discharge has not yet commenced.	-
The sewage treatment plant and the water treatment facility should not be over-capacitated with overwhelming volumes of water at the expense of quality and as such, the maximum operating capacity of these facilities should always be considered. In the event of additional volumes needing treatment, additional facilities must be constructed or current facilities must be improved / expanded to accommodate these volumes. Also, amendments to discharge volumes in the applicable WUL must be approved by the DWS.	Not applicable. Construction activities have not yet commenced.	-
Sludge from the sewage treatment plant must be removed to a licensed hazardous disposal facility.		-
The sediment that has accumulated in the PCDs must be removed to the WRD.		-
Appropriately dispose of all flocculent or polluted water as per the WUL requirements.		-
Brine from water treatment facility must be removed to a licensed hazardous disposal facility.		-
Ensure spillages of brine from water treatment facility do not occur by appointing properly trained responsible personnel to undertake transportation.		-
Ensure that water treatment facility is working optimally to avoid brine spillages.		-
Drainage systems must be maintained regularly in order to minimize the runoff of harmful chemical substances into the associated systems.		-
The pipe transporting water to be discharged must be inspected weekly and maintained to ensure that no leaks are observed and potential erosion is avoided.		-
Switch off dust suppression sprayers when travelling through a wetland system.		-
Regular inspections and maintenance must be undertaken at both treatment facilities (i.e. sewage treatment plant and water treatment facility) in order to facilitate an optimal treatment process.		-
Daily visual inspection by responsible person for water treatment facility to ensure that brine is not routed to stormwater drain or PCD.		-
Conduct daily site inspections to ensure environmental compliance and adherence to mitigation measures.		-
The quality of the discharge from the water treatment facility must be continuously monitored against the water quality stipulated by the DWS to prevent the potential water quality deterioration of the Rietspruit catchment. In the event that the quality of the discharge deteriorates substantially, it is recommended that the treatment method be immediately reviewed and adapted until the required water quality standards are restored.		-
Inspect the Rietspruit discharge point for any channel formation and repair if noted.		-
In the case of an incident occurring which may result in pollution of any surface or groundwater, the Regional Representative of the DWS must be informed as per legislative requirements.		-
Water quality analysis, biomonitoring and sediment quality analysis must be conducted as detailed in the Hydrology Monitoring Programme.	Partially compliant. Water quality analysis and biomonitoring was undertaken in between May and August	1

Management measure	Comment	Compliance
	2021 as part of the dry season monitoring, as per the WUL requirements. Sediment analysis was not undertaken.	
Wetland monitoring must be conducted as per the Wetland Monitoring Programme.	Compliant. Wetland monitoring was undertaken between May and August 2021 as part of the dry season monitoring, as per the WUL requirements.	2
It is recommended that the geochemical model be updated during the life of the mine (at least every 5 years) in order to calibrate and validate its results. The geochemical model must identify potential impacts and assess the effectiveness of mitigation measures. Although numerical groundwater models will be updated/ calibrated during the LoM, it is important that the design criteria for any post-closure mitigation measures as well as potential areas for post-closure decant be determined through numerical groundwater flow and transport modelling, at least 2 years prior to mine closure.	Noted.	-
Towards the end of the LoM, a groundwater study should be performed to determine whether the vertical shaft system should be sealed above the Wits quartzites. The purpose of the study should be to determine if such a seal is required to prevent the formation of a groundwater mixing zone (i.e. mixing of uncontaminated Karoo water and highly saline water from the Wits quartzites). It is recommended that once mining is completed the shaft is sealed above the Wits quartzites, unless determined otherwise through the mentioned studies.		-
Monitoring must be conducted as per the Geohydrology Monitoring Programme to verify predictions and record groundwater quality and groundwater level impacts.	Compliant. Groundwater monitoring was undertaken in August 2021 as part of the dry season monitoring, as per the WUL requirements.	2
Decommissioning		
Ensure that the conditions of any awarded WUL are strictly adhered to.	Not applicable. Decommissioning and closure activities have not commenced.	-
Refer to the Closure Plan, detailing the rehabilitation management measures.		-
The Hydrology, Geohydrology and Wetland Monitoring Programmes must be implemented.		-
Post-closure		
The Hydrology, Geohydrology and Wetland Monitoring Programmes must be implemented.	Not applicable. Decommissioning and closure activities have not commenced.	-

Table 15. Mining waste management measures

Management measure	Comment	Compliance
Construction		
The TSF and WRD must be constructed as per the approved designs under the supervision of a qualified and experienced person.	Not applicable. Construction has not yet commenced.	-
Operation		
The TSF and WRD must be operated and managed under the supervision of qualified and experienced personnel from a reputable company.	Not applicable. Operational activities have not commenced.	-
Drainage infrastructure must be inspected and maintained throughout the LoM.		-
The stability of the foundation of the WRD must be inspected regularly.		-
In the event of TSF failure adequate legal measures must be invoked with regards to affected parties.		-

Table 16. Hydrocarbon management measures

Management measure	Comment	Compliance
Construction, operation, and decommissioning		
All generators will be placed on drip trays to catch spills and leaks, while all maintenance work on equipment, vehicles, machinery, etc. will be done over a plastic tarpaulin or steel drip trays situated within dirty water catchment areas.	Not applicable. Generators, vehicles, and machinery have not been mobilised to site and hazardous materials are not currently stored or handled on site.	-
Any pumps, machinery or other equipment that require oil, diesel, etc., that are to remain in one position for longer than two days will be placed on drip trays which are to be emptied regularly. Any effluent from the drip trays and any spilled oils and fuels will be collected and stored in 210 litre drums within the service-bay area before being collected and disposed of by a licensed waste removal company.		-
The servicing of vehicles and equipment will only be permitted at designated areas such as the workshop which have impermeable surfaces.		-
Store fuel, oils and other lubricants in a bunded storeroom with a capacity to contain 110% of the total volume thereof.		-
Storage of hydrocarbons must be outside of the 100-year flood line of surrounding watercourses.		-
Ensure that all mechanical equipment and vehicles used are kept in good working order to prevent any leakage of oil, petrol, diesel, hydraulic and other associated fluids.		-
Vehicles used during the construction phase must be parked in a designated area and containers must be used to prevent any oil leaks		-
The Mine must keep copies of all disposal certificates on-site.		-
The fuel storage facility and associated bund walls will be maintained according to the SANS for the "storage and distribution of petroleum products in above ground bulk installations" (SANS 10089-1).		-
The contractor(s) supplying fuel and lubricants to the Mine are required to have an emergency management system in place in order to deal with possible vehicle accidents or accidental spillage. This would typically involve emergency teams that would have the capacity to neutralise spills and begin rehabilitation of the affected area within hours.		-
Keep spill kits or sorp materials on hand to clean up hazardous hydrocarbon spills. Once used, this material will be treated as hazardous waste and disposed of accordingly at a permitted hazardous waste site.		-
Should an oil spill occur as a result of leaking equipment, machinery or vehicles, it is to be cleaned utilising oil remediation solvents or commercial hydrocarbon spill kits of which the Mine is to maintain a supply on site.		-
A 210 litre drum for the collection of spilled oils and fuels, together with a drip tray to catch spills and leaks before they can contaminate soil and underlying groundwater, must be available on-site at all times.		-
Implement a spill response plan and train personnel to react efficiently to address any spillage.		-
The catchment berms demarcating the dirty water catchment will be maintained at a minimum height of 0.5 m to ensure that any spilled hydrocarbons transported by stormwater will not enter the clean water catchment.		-
Surface water draining off areas where it may be contaminated by hydrocarbons must be channelled towards a sump and oil trap which will remove hydrocarbons. Oil residue shall be treated with oil absorbent such as Drizit or similar and this material removed to a licensed landfill facility.		-
Decommissioning		
Fuel storage facilities must be removed immediately upon completion of decommissioning phase.		-

Management measure	Comment	Compliance
Soil contaminated with hydrocarbons must be moved to an allocated area where it will be rehabilitated and soil that cannot be rehabilitated must be disposed of at an appropriate landfill facility.	Not applicable. Closure and decommissioning activities have not commenced.	
In the case of pollution of any surface or groundwater, the Regional Representative of the DWS must be informed immediately as per legislative requirements.		-

Table 17. General waste management measures

Management measure	Comment	Compliance
Construction, operation, and decommissioning		
Include effective waste management into environmental awareness training given to all personnel and contractors during induction.	Not applicable. Construction has not commenced. However, these conditions should be applied to ongoing exploration activities.	-
The mine will ensure that an adequate number of waste drums / bins / skips are available within the dirty water catchment area on site, upon a suitably hardened surface surrounded by trenches / berms and reporting to the PCD. Waste must be stored in a manner that it cannot be washed or blown into the environment.		-
Waste drums / bins / skips will be collected regularly and disposed of by the appointed contractor at the nearest landfill facility which is suitably licensed in terms of legislative requirements. Domestic waste includes, but is not limited to plastics, cans, food remains and glass.		-
No waste is permitted to be buried or burned on site.		-
The site must be cleaned daily and litter removed and stored in the bins provided.		-
The washing of clothing, lunch dishes or vehicles is prohibited on site, except within specifically demarcated areas.		-
Waste streams must be recycled or re-used (where possible) before disposal is considered. Recyclable material must be collected by a licensed recycling contractor.		-
The volumes being temporarily stored must be monitored on a continuous basis and the relevant contractor contacted to clear the temporary facilities on a regular basis or on an ad-hoc basis if it is evident that the facilities are reaching capacity. Storage must be carried out as per the norms and standards should storage thresholds (100 m3 of general waste) be exceeded.		-
Waste must be collected and disposed of at a licensed landfill facility on a monthly basis.		-
In order to avoid waste blowing away or falling while stored or transported, the following must be implemented: <ul style="list-style-type: none"> • Ensure that the waste is loaded securely for transport when it leaves the site; • Waste transported off site must be covered; and • Skips must be constructed of steel and possess a sealable drain outlet. 		-

Table 18. Hazardous substances / hazardous waste management measures

Management measure	Comment	Compliance
Construction, operation, and decommissioning		
The mine will comply with the Hazardous Substances Act, No. 15 of 1973 and apply for the necessary permits from the Department of Health if required.	Not applicable. Construction has not commenced.	-
The mine will keep Material Safety Data Sheets (MSDS) on site for all hazardous substances kept on site and comply with the requirements of all MSDS.		-
Include effective and relevant information regarding the handling and storage of hazardous substances / waste into environmental awareness training provided to personnel and contractors during induction.		-
The loading areas must be impermeable to water and runoff must be diverted to a PCD.		-
<ul style="list-style-type: none"> Trucks may not be overloaded and the ore load must be spread evenly within the truck to prevent spillage from the trucks. Trucks must be covered with a tarpaulin to prevent or limit spillage; and Regular inspection along haul roads and loading areas must be undertaken to initiate removal of spillage quickly. 		-
Explosives must be handled at the designated explosives handling facility under the conditions stated in the MSDS.		-
Old explosives and the explosives packaging will be dealt with as legally required by industry practice, in an explosive destruction facility (this should form a condition of contract for any blasting contractors utilised).		-
A walled concrete platform, dedicated store with adequate flooring or bermed area must be used to accommodate substances such as paint, herbicide and insecticides etc., as appropriate according to their specific MSDS, in well-ventilated areas.		-
Storage areas for of potentially hazardous materials must be outside of the 100-year flood line of surrounding watercourses.		-
Cement must be stored- and cement batching must be undertaken on an impermeable surface.		-
Any large spills of hazardous substances will initially be controlled by on-site emergency response personnel, who will be aided by professional contractors depending on the nature of the material spilled. Hydrocarbon spills must be managed as per the Hydrocarbon Management Plan.		-
Surface water draining off contaminated areas must be channelled towards a sump which will separate these substances and oils.		-
Portable septic toilets are to be provided and maintained for construction crews until permanent facilities are available. Maintenance must include their removal without spillage. Sewage infrastructure must be inspected and maintained to ensure no leaks. Under no circumstances may ablutions occur outside of the provided facilities.		-
The sewage treatment plant and associated sewage infrastructure must be monitored and maintained regularly to prevent any blockages, leaks or spillages. If infrastructure does fail, it must be repaired as soon as possible.		-
The bund walls for all storage facilities containing any industrial or related hazardous substances / wastes will have sufficient storage capacity of 110% from the combined storage capacity.		-
The volumes being temporarily stored must be monitored on a continuous basis and the relevant contractor contacted to clear the temporary facilities on a regular basis or on an ad-hoc basis if it is evident that the facilities are reaching capacity. Storage must be carried out as per the norms and standards should storage thresholds (80 m ³ of hazardous waste) be exceeded.		-

Management measure	Comment	Compliance
<p>In order to avoid waste or hazardous substances being exposed while stored or transported, the following must be implemented:</p> <ul style="list-style-type: none"> • Ensure that the waste is loaded securely for transport when it leaves the site; and • Skips must be constructed from steel and possess a sealable drain outlet. 		-
<p>Any hazardous waste generated on-site for disposal will be collected by a licensed hazardous waste contractor for disposal at a licensed landfill facility.</p>		-
<p>The mine will request a safe disposal certificate for all hazardous waste streams removed by external contractors that will be kept on-file for the life of the mine.</p>		-

5.2 Conditions of the IEA

The IEA site specific conditions (Table 19) and Department standard conditions (Table 20) are provided below.

Table 19. Site specific IEA conditions

Condition	Comment	Compliance
The removal of topsoil and vegetation must be limited to the strips actively being mined, stockpiles and loading areas and access roads	Not applicable. Construction and clearing activities have not commenced.	-
Dust suppression must be undertaken through water spraying and it must be done on a regular basis to prevent dust	Not applicable. Activities resulting in the potential generation of dust have not commenced.	-
The listed activities must be undertaken at the alternative site as the protected plant species is dominant at the proposed mining area	Not applicable. Listed activities have not yet commenced on site. The reference to a protected species being located at the mining area is unclear. Only one Protected species (<i>Nerine</i> spp.) under Provincial legislation was found within the study area but this was outside of the infrastructural footprint.	-
Proper erosion control measures must be in place to prevent runoff from discharging into the already mined area, wetlands and rivers	Not applicable. Construction activities have not yet commenced on site.	-
The mine must employ people from the local community	Not applicable. Construction activities have not yet commenced on site.	-
A land use and land development application must be submitted to the municipality in order to rezone the land from agricultural land to mining	Not applicable. Site establishment has not yet commenced. However, Gold One Africa must take note of the requirement for an amendment to the land use zoning, which must be finalised prior to construction.	-
The mine must appoint the qualified botanist to identify plant species of conservation concern which may be impacted	Not applicable. Site establishment has not yet commenced. However, Gold One Africa must take note of the requirement for a qualified botanist to be appointed prior to construction. The botanist will identify species of conservation concern to be removed and relocated. Relevant permits will be required ahead of relocating these species.	-
The mine must obtain the relocation permit for conservation species that may need to be relocated to a registered conservation area		-
An integrated Water Use Licence (IWUL) must be obtained from the Department of Water and Sanitation (DWS) prior to the commencement of the activities	Compliant. A WUL has been issued for the project activities.	2

Table 20. Department standard EA conditions

Condition	Comment	Compliance
1. Scope of Authorisation		
1.1 The holder of the IEA shall be responsible for ensuring compliance with the conditions contained in the IEA. This includes any person acting on the holder's behalf, including but not limited to an agent, servant, contractor, subcontractor, employee, consultant or any person rendering a service to the holder of IEA.	Not applicable. Construction has not yet commenced. As such, most of the IEA conditions are not applicable.	-
1.2 Any changes to, or deviation from the project description set out in this IEA must be approved in writing by this Department before such changes or deviation may be effected. In assessing whether to grant such approval or not, the Department may request such information as is deemed necessary to evaluate the significance and impacts of such changes or deviation and it may be necessary for the holder of the IEA to apply for further authorisation in terms of the EIA Regulations.	Not applicable. No changes are being considered for the project. However, some changes were made to the layout during the compilation of the WULA, to move infrastructure largely out of the 500m regulated zone of wetlands. These changes to the layout are not reflected in the EMPr. The changes are considered minor and have no additional impacts to those assessed in the EMPr but an update to the EMPr will be required to incorporate these changes prior to construction.	-
1.3 The activity (ies), which are authorised, may only be carried out at the property (ies) indicated in the IEA and or on the approved EMPr.	Not applicable. No listed activities have yet commenced on site.	-
1.4 Where any of the holder of the IEA contact details change including name of the responsible person, physical or postal address / or telephonic details, the holder of the IEA must notify the Department as soon as the new details become known to the holder of the IEA.	Non-compliant. The following details have been updated since receipt of the Environmental Authorisation in January 2018. <ul style="list-style-type: none"> • Contact person: Ziyaad Hassam, Legal Advisor • Address for registered mail: PostNet Suite 415, Private Bag X75, Bryanston • Email address: ziyaad.hassam@gold1.co.za • Mobile: +27 83 456 9878 • Office: +27 11 730 7673 The DMRE has not previously been informed of these changes. This audit report will, among others, inform the DMRE of the change to contact details.	0
1.5 The IEA does not negate the responsibility of the holder to comply with any other statutory requirements that may be applicable to the undertaking of such activity (ies)	Not applicable. The EA holder intends to comply with relevant regulatory requirements in addition to the EA. A rezoning application still needs to be submitted for the project area. This should be finalised prior to construction.	-
1.6 The holder of IEA must ensure that all areas where the authorised activities occur have controlled access to ensure safety of people and animals.	Not applicable. No listed activities have yet commenced on site.	-
1.7 The holder of IEA must make sure that copies of the IEA and EMPr are always kept where the listed activity will be undertaken.	Not applicable. No listed activities have yet commenced on site.	-
3. Commencement of the activity (ies)		
3.1 No mining related infrastructure will be located within the 1:100 year flood line or within 100m of the Rietspruit River	Not applicable. Construction has not yet commenced on site. All infrastructure has been located outside of the 1:100 year flood line or 100m from the river	-

Condition	Comment	Compliance
3.2 Water from the mining area and related activities must be treated before it is discharged into any natural watercourse or water system	Not applicable. Construction has not yet commenced on site.	-
3.3 The design feature characteristics of the waste rock dump must be as per the EIAR and EMPr dated 28 th September 2017	Not applicable. Construction has not yet commenced on site.	-
3.4 The safety classification for the waste rock must be done in accordance with the South African Code of Practise for Mine Residue Deposits (SANS 10286:1998) and the requirements of Section 3 of GN 527 of the MPRDA	Compliant. A safety classification has been undertaken for the waste rock dump, with the hazard rating determined to be low. The reference to Section 3 is unclear. Part III of Chapter 2 of GN527 deals with environmental regulations, including environmental reports (Scoping and EIA, EMPr), financial provision, monitoring and performance assessments, mine closure, all of which have been addressed previously, resulting in the issue of an Environmental Authorisation for the project.	2
3.5 Effective dust control measures must be put in place to mitigate dust from the waste rock dump at all times and these measures must be increased during windy season	Not applicable. Construction has not yet commenced on site.	-
3.6 Water monitoring must be done as per the conditions set out in the water use licence or per DWS standards	Compliant. Water monitoring has been undertaken to date as per the WUL conditions. The most recent sampling was undertaken in August 2021.	2
3.7 Mining and related activities must be implemented and managed in a way that pollution and reduction of groundwater is prevented	Not applicable. Construction has not yet commenced on site.	-
3.8 The design feature characteristics of the tailings dam must be done as per the EIAR and EMPr dated 28 th September 2017		-
3.9 Water from the return water dam must be used to assist with the establishment of vegetation on the tailings dam		-
3.10 Sewage must be managed as outlined in the EIAR and EMPr dated 28 th September 2017		-
3.11 Environmental damage must be minimised to the extent that they are acceptable to all parties involved		-
3.12 All other monitoring and mitigation measures outlined in the EIAR and EMPr must be strictly adhered to at all times		-
3.13 The National Nuclear Regulator (NNR) must be consulted before commencement of mining and listed activities and their recommendations must be strictly adhered to regarding radiation material		-
3.14 No activity is to occur within wetlands and their 100m buffer zones, within rivers and their 100m buffer zones / 1:100 year flood line without the necessary authorisation under NEMA and NWA		-
3.15 Protected species must remain in situ until the necessary permits are obtained under NEM:BA		-
3.16 In order to ensure safety, all employees must be given the necessary personnel protective equipment (PPE) and training		-

Condition	Comment	Compliance
3.17 This IEA must be provided to the site operator and the requirements thereof must be made fully known to him or her		-
3.18 Hauling routes for construction vehicles and machinery must be clearly marked and appropriate signalling must be posted to that effect. Furthermore, movement of construction vehicles and machinery must be restricted to areas outside of the drainage line or wet areas		-
3.19 Appropriate notification signage must be erected at the mining site, warning the public (residents, visitors, etc) about the hazard around the mining site and presence of heavy vehicles and machinery		-
3.20 Vegetation clearance must be limited on areas where the individual activities will occur, and mitigation measures must be implemented to reduce the risk of erosion and alien species invasion.	Not applicable. Vegetation clearance has not commenced.	-
3.21 The holder of the IEA must note that in terms of the National Forest Act (Act No. 84 of 1998) protected plant species, also listed in must not be cut, disturbed, damaged, destroyed and their products must not be possessed, collected, removed, transported, exported, donated, purchased or sold unless permission is granted by the Department of Agriculture, Forestry and Fisheries.	Noted. The EMPr requires Gold One Africa to appoint a botanist to undertake a survey of the site prior to construction, to determine whether any conservation important plant species need to be relocated.	-
3.2.2 Construction areas (e.g. material lay down areas), topsoil and subsoil must be protected from contamination or pollution. Stockpiling must not take place in drainage lines or areas where it will impede surface water runoff	Not applicable. Construction has not yet commenced on site.	-
3.23 If any soil contamination is noted at any phase of the proposed activity (ies), the contaminated soil must be removed to a licensed waste disposal facility and the site must be rehabilitated to the satisfaction of the Department and Department of Water and Sanitation. The opportunity for the on site remediation and re-use of contaminated soil must be investigated prior to the disposal and this Department must be informed in this regard	Not applicable. Machinery and vehicles have not been mobilised to site.	-
3.24 An integrated waste management approach must be implemented that is based on waste minimisation and must incorporate avoidance, reduction, recycling, treat, reuse and disposal where appropriate. Uncontaminated rubble generated on the premises can be re-used as back filling material on site. Ensure that no refuse or rubble generated on the premises is placed, dumped or deposited on the adjacent properties or public places and open space	Not applicable. Site operations have not commenced.	-
3.25 In terms of sections 28 and 30 of NEMA, and sections 19 and 20 of the National Water Act, 1998 (No. 36 of 1998), any costs incurred to remedy environmental damage must be borne by the person responsible for the damage. It is therefore imperative that the holder of the IEA reads through and understands the legislative requirements pertaining to the project. It is the holder of IEA's responsibility to take reasonable measures which include informing and educating contractors and employees about environmental risks of their work and training them to operate in an environmentally acceptable manner	Compliant. The holders of the EA have undertaken to update the financial provision calculation based on inflation in order to ensure that sufficient funding is available for closure and rehabilitation (Prime Resources, November 2021).	2

Condition	Comment	Compliance
3.26 Construction vehicles must be serviced and maintained in the manner whereby excessive smoke and noise production is reduced to acceptable levels, and to prevent oil leaks. Contaminated soil must be remediated on site or removed to an authorised landfill site	Not applicable. Construction has not yet commenced on site.	-
3.27 Residents (if any) on the property (ies) and surrounding areas must be informed if any unusual noisy activities are planned.		-
3.28 Dust suppression measures must be implemented on all exposed surfaces to minimise and control airborne dust		-
3.29 Mixing of cement, concrete, paints, solvent, sealants and adhesive must be done in specified areas on concrete aprons or on the protected plastic linings to contain spillage or overflow onto soil to avoid contamination of underground water and environmental damage		-
3.30 Should any heritage remains be exposed during operation or any actions on the site, these must immediately be reported to the South African Heritage Resources Agency (SAHRA) and in accordance with the applicable legislation. Heritage remains uncovered or disturbed during earthworks must not be further disturbed until the necessary approval has been obtained from the South African Heritage Resource Agency (SAHRA). Heritage remains include: archaeological remains (including fossil bones and fossil shells); coins; middens; indigenous and/or colonial ceramics; any articles of value or antiquity marine shell heaps; stone artifacts and bone remains; structures and other built features; rock art and rock engravings; shipwrecks; and graves or unmarked human burials. A qualified archaeologist must be contracted where necessary (at the expense of the company and in consultation with the relevant authority) to remove any human remains in accordance with the requirements of the relevant authority		-
3.31 Care must be taken to ensure that the material and excavated soil required for backfilling are free of contamination from hydrocarbons	Not applicable. Decommissioning and closure have not commenced.	-
3.32 Hydraulic fluid or chemicals required during construction must be stored in a concrete lined surface with bund walls and shall be designed in such a manner that any spillage can be contained and reclaimed without any impact on the surrounding environment. Should any spills occur it should be cleaned immediately by removing spillage together with the polluted solids and dispose it in the authorised disposal site permitted for such waste. The regional office of the Department of Water and Sanitation must be notified within 24 hours of an incident that may pollute surface and underground water resources	Not applicable. The construction and operational phases have not commenced. No incidents in terms of Section 30 of NEMA have occurred on site.	-
3.33 Chemical sanitation facilities or systems such as toilets that do not rely on the seepage of liquids must be provided with a ratio of 1 for every 15 workers. These must be placed such that they prevent spills or leaks to the environment and must be maintained according to the operating instructions and the content thereof must be disposed of at an authorised waste water treatment works	Not applicable. Construction has not yet commenced. However, this condition may be applicable to exploration activities which were not taking place during the site visit, therefore this condition will be assessed during the next audit.	-

Condition	Comment	Compliance
3.34 The holder of IEA must ensure that any water uses listed in terms of Section 21 of National Water Act must get authorisation from Department of Water and Sanitation prior to the commencement of such activity (ies)	Compliant. The holder of the EA has received a Water Use Licence for the Project in terms of section 21 of National Water Act, 1998 (Act 36 of 1998).	2
3.35 This IEA does not purport to absolve the holder of the EA from its common law obligations towards the owner of the surface of land affected	Compliant. An agreement is in place for the use of the land for exploration activities. An updated agreement will need to be put in place once the Project is implemented.	2
3.36 The holder of the IEA must ensure that rehabilitation of the disturbed areas caused by operation at all times comply with the approved EMPr	Not applicable. No disturbed areas are to undergo rehabilitation.	-
3.37 This IEA may be amended or withdrawn at any stage for non-compliance and provides no relief from the provisions of any other relevant statutory or contractual obligations	Not applicable. The EA has not been amended or withdrawn.	-
3.38 The holder of the IEA must note that in terms Section 43A of the NEM:WA, residue deposit and residue deposit must be deposited and managed in a prescribed manner on any site demarcated for that purpose in the revised EMPr. No person may temporary or permanently deposits residue stockpile or residue deposit on any area or site other than on site indicated on the revised EMPr	Not applicable. No residue deposits have been constructed for this project.	-
3.39 The holder to the IEA must note that in terms of Section 20 of the NEM:WA, no person may commence, undertake or conduct a waste management activity, except in accordance with the requirements of norms and standards determined in terms of Section 19(3) for that activities or a waste management licence is issued in respect of that activity if licence is required	Not applicable. To the Auditor's knowledge the EA has not been appealed or suspended.	-
3.40 An appeal under Section 43(7) of the NEMA suspends an IEA or exemption or any provisions of conditions attached hereto, or any directive unless the Minister directs otherwise	Not applicable. To the Auditor's knowledge, no appeal has been submitted in terms of Section 43(7)	-
3.41 Should you be notified by the Minister of a suspension of the authorisation pending appeal procedure, you may not commence with the activity (ies) until such time that the Minister allows you to commence with the activity (ies) in writing		-
3.42 The Department reserves the right to audit and/or inspect the activity (ies) without prior notification at any reasonable time and at such frequency as may be determined by the Regional Manager	Not applicable. To the Auditor's knowledge, the Department has not undertaken any inspections at the site.	-
3.43 The waste storage site must have a firm, impenetrable, chemical resistant flood and a roof to prevent direct sunlight and rain water from getting into contact with the waste	Not applicable. Construction has not yet commenced on site.	-
3.44 The storage of hydrocarbons must have bund walls with adequate capacity to contain the maximum volume that is stored in the area. Uncontaminated storm water must be prevented from coming into contact with the waste and must be diverted away from the storage site		-
3.45 Subject to the commencement and duration requirements of the MPRDA and NEMA for the listed mining activity is valid for the period for which the aforesaid permit is granted provided that this activity must commence within 10 years. If the commencement of the activity does not occur within the specified period, the IEA lapses	Noted. Environmental Authorisation was granted in January 2018. Listed activities have not yet commenced on site but the EA allows the commencement of activities to occur until January 2028.	-

Condition	Comment	Compliance
and a new application for IEA in terms of the NEMA and the EIA Regulations should be made for the activity to be undertaken.		
3.46 This IEA will only be effective in the event that a corresponding Permit or right is issued in terms of MPRDA as amended and none of the activities listed in this IEA may commence without permit	Compliant. A mining right has been issued for the Ventersburg Gold Mine.	2
3.47 The listed activity (ies), including site preparation, must not commence within 20 (twenty) calendar days of the date of the notification of the decision being sent to the registered I&APs. In the even that an appeal is lodged with the appeal administrator, the effect of this environmental authorisation is suspended until such time as the appeal is decided.	Compliant. The listed activities have not commenced.	2
3.48 Should there be any conflicting conditions between this IEA and other approvals granted by other authorities, it is upon the holder of the IEA to bring it to the attention of the Department for resolution	Noted. No conflicting conditions have been noted between this, the EMPr, WUL or IWWMP.	-
3.49 Indigenous animals and birds that are found within the approved prospecting area must not be harmed and must be protected as far as it is practicable	Not applicable. Construction has not yet commenced. It is assumed that this condition relates to the approved mining area rather than prospecting area.	-
3.50 No protected plant species (either mentioned or not mentioned in the report) must be removed unless the necessary permission is granted by the Department of Agriculture, Forestry and Fisheries (DAFF)	Noted. The EMPr requires Gold One Africa to appoint a botanist to undertake a survey of the site prior to construction, to determine whether any conservation important plant species need to be relocated.	-
3.51 The activity must comply substantially with the layout plans attached and included in the revised EIAR and EMPr dated the 28 th of September 2017	Noted. Some changes were made to the layout during the compilation of the WULA, to move infrastructure largely out of the 500m regulated zone of wetlands. These changes to the layout are not reflected in the EMPr. The changes are considered minor and have no additional impacts to those assessed in the EMPr but an update to the EMPr is required to incorporate these changes prior to construction.	-
3.52 In terms of section 24F of the NEMA, failure to comply with the conditions of this environmental authorisation constitutes an offence for which a convicted person may be liable to a fine not exceeding R5 million or imprisonment for a period not exceeding ten years of both such fine and such imprisonment.	Noted.	-
4. Management of activity (ies)		
4.1 A copy of the IEA and EMPr must be kept at the property or on site office where the activity (ies) will be undertaken. The IEA and EMPr must be produced to any authorised officials of the Department who request to see it and must be made available for inspection by any employee or agent of the holder of the IEA who works or undertakes work at the property (ies).	Not applicable. There are currently no site offices in which to keep the EA and EMPr.	-
4.2 The content of the EMPr and its objectives must be made known to all contractors, subcontractors, agent and any other people working on the site, and any updates or amendments to the EMPr must be submitted to the Department for approval.	Not applicable. There were no contractors or subcontractors working on the site at the time of the site visit. However, this condition may apply to exploration activities and should be assessed during the next audit.	-

Condition	Comment	Compliance
4.3 Regular monitoring and maintenance of storm water drainage facilities must be conducted at all times, if damaged as directed by the Department or any other relevant authority	Not applicable. Stormwater infrastructure has not been installed.	-
4.4 A buffer zone of 100 metres between the activity (ies) and the residential areas, cemeteries or burial grounds must be clearly demarcated and maintained	Not applicable. Construction has not occurred on site. All activities have been planned to occur >100m from any residential areas.	-
4.5 Mining activities must be managed and operated in accordance with the Environmental Management Systems (EMS) that inter alia identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents and non-conformances and those drawn to the attention of the holder of the IEA as a result of complaints	Not applicable. The construction and operational phases have not commenced.	-
4.6 The holder of the IEA must prevent nuisance conditions or health hazards, or the potential creation of nuisance conditions or health hazards		-
4.7 All sanitary facilities provided on site must be emptied on a weekly basis and be maintained in a good hygienic condition		-
4.8 The holder of the IEA must ensure that all non-recyclable wastes are disposed of at waste management facilities licensed to handle such wastes and all recyclable wastes are collected by licensed waste management facilities for recycling, reuse or treatment		-
4.9 The holder of the IEA must ensure that all liquid wastes, who emissions to water or land could cause pollution are diverted to sewer, after testing water quality and receiving written approval from the relevant local authority		-
4.10 Non-compliance with any condition of this IEA or EMPr may result in the issuing of a directive in terms of section 28 and or a compliance notice in terms of section 31L of NEMA	Not applicable. No directive or compliance notice has been issued in terms of section 28 or section 31L of NEMA, respectively.	-
4.11 Only listed activities that are expressly specified in the EMPr that forms part of this IEA may be conducted, and additional or new activities not specified herein must be applied for by the holder and authorised by the competent authority in the form of an amendment to the aforesaid EMPr before such activities may be commenced with. This condition is also applicable in the case of the amendment, addition, substitution, correction, and removal or updating of any detail in the aforesaid EMPr	Not applicable. No new listed activities are contemplated for this project.	-
4.12 Rehabilitation of the disturbed surface caused by operation at all times must comply with the approved EMPr	Not applicable. Rehabilitation of disturbed land has not commenced.	-
4.13 No fires are permitted in or near the mining area	Not applicable. Construction has not yet commenced.	-
4.14 In the event of vehicle breakdown, maintenance must be done with care. Drip trays must be used to control oil spillages		-
4.15 All oil spillages must be immediately clean up and treated accordingly.		-
4.16 The holder of IEA must ensure that the name and contact details of the ECO are made available to the Regional Manager within 30 days of commencement. The holder of IEA must also ensure that an ECO is always available on site to ensure that activity (ies) at all times comply with the issued IEA and approved EMPr.		-
4.17 The ECO must:		-

Condition	Comment	Compliance
4.17.1 Keep and maintain a detailed incidents register (including any spillages of fuels, chemicals or other material) 4.17.2 Keep a complaint register on site indicating the complaint and how the issues were addressed, what measures were taken and what preventative measures were implemented to avoid re-occurrence of complaints 4.17.3 Keep records relating to monitoring and auditing on site and avail them for inspection to any relevant authorised officials 4.17.4 Keep copies of all environmental reports submitted to the Department 4.17.5 Keep the records of all permits, licences and authorisations required by the operation 4.17.6 Compile a monthly monitoring report and make it available to the Department if requested		
4.18 The duties and responsibility of the ECO should not be seen as exempting the holder of the IEA from the legal obligations in terms of the NEMA		-
4.19 Erosion and soil loss must be prevented by minimising the construction site exposed to surface water run-off. Where necessary erosion stabilising action such as gabions or revegetation must be implemented to prevent further habitat deterioration.		-
4.20 The holder of the IEA must ensure that all personnel who work with hazardous waste are trained to deal with these potential hazardous situations so as to minimise the risk involved. Records of training and verification of competence must be kept by the holder of the IEA		-
4.21 In order to prevent nuisance conditions, the holder of the IEA must ensure that all storage skips and bins are not overfilled		-
5. Reporting to the Department		
5.1 The holder of the IEA must:		
5.1.1 Submit an Environmental Audit Report to this Department annually and such report must be done by an independent person with relevant environmental audit expertise to compile an environmental audit report. The environmental audit must be in line with regulation 34 and appendix 7 of the EIA Regulations and specify whether conditions of this EA and an approved EMPr are adhered to	Not applicable. This report serves as the first Environmental Audit Report. However, it covers the period January 2018 to November 2021. Subsequent audits should be undertaken annually.	-
5.1.2 identify and assess any new impacts and risks as a result of undertaking the activity/ies, if applicable	Not applicable. The listed activities have not commenced.	-
5.1.3 identify shortcomings in the EMPr, if applicable	Not applicable. The listed activities have not commenced therefore	-
5.1.4 identify the need, if any, for any changes to the management, avoidance and mitigation measures provided for in the EMPr	the performance of the EMPr cannot be adequately assessed and improved.	-
5.1.5 if applicable, specify that the corrective action/s taken for the previous audit's non-conformities, was adequate	Not applicable. This EAR constitutes the first audit of the EMPr and EA.	-
5.1.6 Specify the name of the auditor	Compliant. This report specifies the names of the people involved in the audit.	2

Condition	Comment	Compliance
5.1.7 Submit the Environmental Audit to the Department within 30 days from the date on which the auditor finalised the audit	Not applicable. The EAR will be submitted to the CA within 30 days of finalising the audit. Timeframes will be assessed during the next audit.	-
5.2 Should any shortcomings in terms of Regulation 34(4) be identified, the holder must submit recommendations to amend the EMPr/closure plan in order to rectify any shortcomings with the aforementioned audit report	Compliant. This is the first audit of its type. No shortcomings have been identified in this EAR.	2
5.3 Any complaint received from the I&APs during all phases of the operation must be attended to as soon as possible and addressed to the satisfaction of all concerned interested and affected parties	Not applicable. No complaints have been received from I&APs	-
5.4 The holder of the IEA must annually assess the environmental liabilities of the operation by using the master rates in line with the applicable Consumer Price Index (CPI) at the time and address the shortfall on the financial provision submitted in terms of section 24P of NEMA	Compliant. An update to the financial provision is being prepared and will be submitted to the CA with this report (Prime Resources, November 2021).	2
5.5 The holder of the IEA must, within 24 hours of incidents occurring, notify the Competent Authority of the occurrence or detection of any incident on the site, or incidental to the operation of the site, which has the potential to cause, or has caused pollution of the environment, health risks, nuisance conditions or water pollution	Not applicable. To the Auditor's knowledge no incidents in terms of Section 30 of NEMA have occurred on site.	-
5.6 The holder of the IEA must, within 14 days, or a shorter period of time, if specified by the Competent Authority from the occurrence of detection of any incident referred to in condition 5.5, submit an action plan, which must include a detailed time schedule, and resource allocation signed off by top management, to the satisfaction of the Competent Authority of measures taken to		-
5.6.1 Correct the impact resulting from the incident		-
5.6.2 Prevent the incident from causing any further impact, and		-
5.6.3 Prevent a recurrence of a similar incident		-
5.7 In the event that measures have not been implemented with 21 days of the incident referred to in condition 5.6, or measures which have been implemented are inadequate, the Competent Authority may implement the necessary measures at the cost of the holder of the IEA.		-
6. Site security and access control		
6.1 The holder of the IEA must ensure effective access control on the site to reasonably prevent unauthorised entry. Signs indicating the risks involved in unauthorised entry must be displayed at each entrance	Not applicable. Gold One has not taken control of the property which is still being used for farming activities and the mine has not implemented access control to the site.	-
6.2 Weather proof, durable and legible notices in at least three official languages applicable in the area must be displayed at each entrance to the site. These notices must prohibit unauthorised entry and state the hours of operation, the name, address and telephone number of the holder of the IEA and the person responsible for the operation of the site	Not applicable. The property is still being used for farming activities and the mine has not displayed any notices regarding mining activities.	-
7. Emergency preparedness plan		

Condition	Comment	Compliance
7.1 The holder of the IEA must maintain and implement an emergency preparedness plan and review it bi-annually when conducting audits and after each emergency and or major accident. The plan must, amongst others, include:	Compliant. An Emergency Preparedness and Response Plan (EPRP) is included in the EMPr and has not been revised since. A comprehensive standalone EPRP should however be compiled for the site prior to construction. Once activities are underway on site, this plan should be reviewed bi-annually, when conducting audits and after each emergency or major accident.	2
7.1.1 Site fire	Compliant. The EPRP addresses uncontrolled fires.	2
7.1.2 Spillage	Compliant. The EPRP addresses bulk fuel spills.	2
7.1.3 Natural disasters such as floods	Compliant. The EPRP addresses natural disasters.	2
7.1.4 Industrial action, and	Non-compliant. The EPRP does not address industrial action.	0
7.1.5 Contact details of police, ambulances, and any emergency centre closer to the site	Non-compliant. The EPRP does not contain contact details for the local police, ambulance or emergency centre	0
7.2 The holder of IEA must ensure that an up-to-date emergency register is kept during all phases of the operation. This register must be made available upon request by the Department.	Noted. There is not currently an emergency register on site but no environmental emergencies have occurred on site to date.	-
8. Investigations		
8.1 If, in the opinion of the CA, nuisances or health risks may be or are occurring on the site, the holder of the EA must initiate an investigation into the cause of the problem or suspected problem.	Not applicable. The CA has not provided an opinion on nuisances or health risks.	-
8.2 If, in the opinion of the CA, pollution may be or is occurring, the holder of the EA must initiate an investigation into the cause of the problem or suspected problem. Such investigation must include the monitoring of the water quality variable, at those monitoring points and such frequency as may be specified by the CA.	Not applicable. The CA has not provided an opinion on pollution at the project.	-
8.3 Investigations carried out in terms of conditions 8.1 and 8.2 above must include the monitoring of the relevant environmental pollution, nuisance, and health risk variables, at those monitoring points and such frequency to be determined in consultation with the Competent Authority.	Not applicable. See comments in terms of conditions 8.1 and 8.2.	-
8.4 Should the investigation carried out as per conditions 8.1 and 8.2 above reveal any unacceptable levels of pollution, the holder of the EA must submit mitigation measures to the satisfaction of the CA.		-
9. Commissioning and decommissioning		
9.1 The commissioning and decommissioning of individual activities within the overall listed mining activity must take place within the phases and timeframes as set out in the revised EMPr.	Not applicable. Activities have not yet been commissioned.	-
10. Site closure		
10.1 The holder of the EA must apply for a closure certificate as prescribed in the MPRDA and any other applicable legislation.	Not applicable. To the Auditor's knowledge the holder of the EA has no intention of abandoning, cancelling, ceasing, relinquishing, or completing the development within 180 days.	-
10.2 The application for closure indicated above must be submitted together with all relevant documents as prescribed in the MPRDA and any other applicable legislation		-
10.3 No exotic plants may be used for rehabilitation purposes only indigenous plant can be utilized for rehabilitation purposes.	Not applicable. No rehabilitation activities are taking place.	-

Condition	Comment	Compliance
10.4 The holder of the IEA remains responsible for any environmental liability, pollution or ecological degradation, the pumping and treatment of extraneous water, compliance with the conditions of IEA and the management and sustainable closure thereof until the Minister has issued a Closure Certificate in terms of Section 43 of the MPRDA as amended. Where necessary the Minister may retain a portion of financial provision for residual, health or environmental impacts that might be known in future.	Not applicable. See comments in terms of condition 10.1.	-

5.3 Site photographs



6 CONCLUSIONS AND RECOMMENDATIONS

This environmental audit report was compiled to comply with the legislative requirements of NEMA, conditions of the IEA, and commitments made in the EMPr. The audit report will be submitted to the DMRE Free State Province. Within 7 days of submission of this audit report to the DMRE, Gold One Africa Ltd will notify all potential and registered IAPs of the submission and make this report immediately available on its website and to anyone on request.

6.1 Compliance scores

At the time of the audit, the Project was in the pre-construction phase. Many of the EMPr commitments and EA conditions are associated with the subsequent project phases (construction, operation, and closure). Therefore, these mitigation measures and EA conditions were not applicable to the current stage of the project and could not be adequately assessed in terms of Section 4.4. However, they will be assessed in future audits once the various phases commence.

A total of 323 EMPr commitments and 128 EA conditions were evaluated during the audit. The compliance scores against the EMPr and EA are shown in Table 21. **Of the 6 auditable commitments in the EMPr, the site scored 83.3 %. Of the 18 auditable conditions of the EA, the site scored 83.3 %.**

Table 21. Compliance scores for Ventersburg Gold Mine

Criteria	EMPr commitments	Score	EA conditions	Score
No. of conditions evaluated	323		128	
No. of auditable conditions	6		18	
Maximum score		12		36
Compliant	4	8	15	30
Partially compliant	2	2	-	-
Non-compliant	-	-	3	0
		10 (83.3%)		30 (83.3 %)

6.1.1 Compliance with the EMPr

Due to the phase the Project, only six of the EMPr commitments were relevant to the activities taking place at the time of the audit. Two of these were considered partially compliant:

- Water quality analysis and biomonitoring were undertaken in between May and August 2021 as part of the dry season monitoring, as per the WUL requirements. Sediment analysis was not undertaken.
- An invasive species control plan has been developed in for the site (submitted in support of the WULA.) This plan should be submitted to the Department of Small Business Development, Tourism and Environmental Affairs (DESTEA) for approval.

6.1.2 Compliance with the EA

As with the EMPr commitments, many of the EA conditions were not applicable to the phase that the Project was in at the time of the audit. Of the 18 conditions that were auditable, three were considered non-compliant. These were related to the content of the Environmental Preparedness and Response Plan (EPRP), which does not contain measures related to the risk of industrial action or contact details for the local police, ambulance, or emergency centre.

In addition, contact details for Gold One Africa have been updated since the Environmental Authorisation was issued in January 2018. This report serves, among others to inform the Department of these changes:

- Contact person: Ziyaad Hassam, Legal Advisor
- Address for registered mail: PostNet Suite 415, Private Bag X75, Bryanston
- Email address: ziyaad.hassam@gold1.co.za
- Mobile: +27 83 456 9878
- Office: +27 11 730 7673

6.2 Adequacy of the Ventersburg EMPr

The EMPr is considered effective but this cannot be confirmed as no activities were taking place at the time of the site visit. No new risks or impacts were identified during the site visit, nor were any shortcomings identified in the EMPr.

Updates to the site layout have been undertaken since the approval of the EMPr to place infrastructure out of the 500m regulated zone of wetlands, for the purposes of the Water Use Licence Application (WULA). The EMPr should be updated to reflect these minor changes to the layout.

6.3 EMPr recommendation report

Regulation 34 of the NEMA EIA Regulations (2014) requires the holder of the EA to submit recommendations to amend the EMPr or closure plan where findings of the EAR indicate:

- Insufficient mitigation of environmental impacts associated with the undertaking of activity
- Insufficient levels of compliance with the EA or EMPr.

Based on the findings of the audit no recommendation for the amendment is proposed in terms of Regulation 35 of the EIA Regulations (Section 2.2). However, with the amendments to the site layout to satisfy WULA requirements, it is recommended that the EMPr is amended in terms of Regulation 36(2) of the EIA Regulations (2014). These changes do not include any new listed activities in terms of NEMA, nor do they present any additional or significant environmental or social impacts. Once amended, the EMPr will be submitted to the DMRE for approval prior to the project entering the construction phase. The EMPr updates are not required to be subjected to a public participation process however, registered IAPs must be notified of the changes to the EMPr.

6.4 Recommended actions

The audit identified several commitments and conditions that should be addressed prior to construction but may not yet be relevant, considering the unknown timeframe for construction. While these commitments were not considered non-compliant or partially compliant, recommendations are provided to address these timeously. Timeframes for construction must be determined and actions planned to align with the following commitments:

- Air quality monitoring should commence at least one year prior to the construction phase to allow for the collection of an ambient air quality baseline data set.
- A weather station is required to be installed on site prior to construction.

- Relevant archaeological training material must be compiled and incorporated into the environmental awareness plan.
- A summer botanical survey must be undertaken prior to construction. This will inform the need to obtain relocation permits for protected plant species. A fire management plan and invasive species management plan must also be compiled prior to construction.
- A structural survey is required to be undertaken prior to any blasting.
- Additional radiological data must be collected at least two years before mining commences. In parallel, a comprehensive application must be prepared and submitted to the NNR.
- Prior to construction occurring, agreements with landowners must be finalised.
- Livelihood restoration opportunities for farmworkers must be investigated and finalised prior to construction.
- Recruitment and procurement policies and procedures must be compiled prior to construction.
- An in-migration management plan, compiled with the input of the local municipality, must be in place prior to construction
- Relevant documentation must be put in place prior to construction to ensure an adequate complaints procedure, health awareness programmes, procedures for reporting illegal mining, ongoing communication with communities, and good relationships with employees.
- Existing locally sourced accommodation for employees and contractors must be considered prior to construction.
- Gold One must bear in mind the requirements for road and intersection upgrades, as well as relevant pedestrian crossings.
- Visual screening commitments such as planting of trees must commence as soon as possible.
- Gold One Africa must take note of the requirement for an amendment to the land use zoning, which must be finalised prior to construction.
- Since exploration commenced on site after the site visit in August 2021, this report does not assess the conditions as they relate to those activities. In the next annual audit, exploration activities must be considered and assessed against these conditions.

6.5 Conclusions

In terms of Regulation 34 of the EIA Regulations, within 7 days of the date of submission of the EAR to the DMRE, Gold One Africa is required to notify all potential and registered IAPs of the submission of the report, to and make the report immediately available - (a) to anyone on request; and (b) on a publicly accessible website, if such a website is available.

6.6 Financial Provision and Rehabilitation

An update of the Financial Provisioning for the Ventersburg Gold Mine was undertaken and finalised in November 2021. Table 22 reflects the 2017 (original) financial provision for the Project as well as the 2021 (first annual update after approval) financial provision.

Table 22. Total financial provision for closure for Ventersburg Gold Mine

2017	2021
R 127,601,945	R 150,804,134

Appendix A

Declarations

I, Gené Main, of Prime Resources (Pty) Ltd, declare that

- I will act as an independent auditor and that neither myself nor Prime Resources (Pty) Ltd has any business, financial, personal, or other interest in this project other than fair remuneration for undertaking services related to the environmental audit.
- I will undertake the services related to the audit in an objective manner, even if this results in findings and recommendations that are not favourable to our client.
- There are no circumstances that will compromise my objectivity and independence in undertaking this work.
- I have the necessary expertise and experience to conduct this environmental audit, including knowledge of the relevant legislation.
- I have not, and will not, engage in conflicting interests in the undertaking of the audit.
- All information furnished by me for the audit is true and correct at the time of compiling the report.



Signed

Date: 15 December 2021

I, Stephen Tarlton, of Prime Resources (Pty) Ltd, declare that

- I will act as an independent auditor and that neither myself nor Prime Resources (Pty) Ltd has any business, financial, personal, or other interest in this project other than fair remuneration for undertaking services related to the environmental audit.
- I will undertake the services related to the audit in an objective manner, even if this results in findings and recommendations that are not favourable to our client.
- There are no circumstances that will compromise my objectivity and independence in undertaking this work.
- I have the necessary expertise and experience to conduct this environmental audit, including knowledge of the relevant legislation.
- I have not, and will not, engage in conflicting interests in the undertaking of the audit.
- All information furnished by me for the audit is true and correct at the time of compiling the report.



Signed

Date: 15 December 2021