



**ANGLO AMERICAN INYOSI COAL
PROPRIETARY LIMITED (A MEMBER OF
THUNGELA RESOURCES LIMITED)**

ZIBULO COLLIERY OPENCAST

Final

Environmental Audit Report

Submitted as contemplated in section 24N (7) (d) of the National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA) and Regulation 34 under Part 3 of Chapter 5 of the amended Environmental Impact Assessment Regulations, 2014 (Government Notice No. 982) (EIA Regulations, 2014)

DMR Reference No's: 17/2/2/NK-7, 30/5/1/2/2/305 MR, 30/5/1/1/2/305 MR

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Geovicon Environmental (Pty) Limited
(Environmental & Geological Consultants)

www.geovicon.co.za

As of 7 June 2021, following the completion of the demerger of high-quality export thermal coal operations from Anglo American, Thungela has successfully listed on the Johannesburg and London stock exchanges. As such, we will now legally change our name from Anglo Operations Proprietary Limited ("AOPL") to Thungela Operations Proprietary Limited ("TOPL"). Thungela offers investors access to a high-quality thermal coal business with low cash cost and high-margin assets, as well as a strong balance sheet, underpinned by a robust environmental, social and governance ("ESG") framework.

Thungela owns interests in and produces thermal coal predominantly from six collieries located in Mpumalanga, South Africa. The business address has changed to **25 Bath Avenue; Rosebank; 2196; South Africa** however, the specific mines addresses remain unchanged. It is important to note that the legal name change from Anglo Operations (Pty) Ltd to Thungela Resources (Pty) Limited will officially be effective early 2022.

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1. INTRODUCTION

Zibulo Colliery (underground mining operation), which is a division of Anglo American Inyosi Coal Proprietary Limited (A Member of Thungela Operations Limited) is an operational underground coal mine located 17 km South-west of Ogies within the Nkangala District Municipality, Mpumalanga Province. Zibulo Colliery Underground (UG) consists of a portal from where a decline shaft is used to extract the underground coal reserves. Access to the reserves is obtained by a vertical man and materials shaft located on the farm Rietvlei 64 IS. The incline shaft is located near the vertical shaft. The mining of the No. 2 select coal horizon is done via bord-and-pillar mining method. The reserves are located at depths of between 80 and 130 metres below surface. A number of vent shafts have and will be constructed at various locations over the reserves as mining progresses.

Coal is transported via a ± 15 km conveyor system to the Phola Coal Processing Plant. At the time of the feasibility study and Mining Right Application ("MRA"), the project was referred to as the Zondagsfontein Mine or Zondagsfontein Colliery, but more recently referred to as Zibulo Colliery.

The Run of Mine ("ROM") reserves for the Zibulo Colliery UG mining area are estimated at 150 million tons for the No. 2 select coal seam. The production rate for the Zibulo Colliery UG is planned to be 7 million tons of coal per annum and the life of mine is about 22 years.

Anglo American Inyosi Coal Proprietary Limited (A Member of Thungela Operations Limited) appointed Geovicon Environmental (Pty) Limited to assess the compliance of Zibulo Colliery UG mining operation against conditions/commitments of the Environmental Authorisation (EA) for the development of the Zondagsfontein Coal Mine; the Environmental Management Program (EMPr) that formed part of the mining right application for; as well as EMPr that formed part of the environmental assessment and authorisation application for the Ventilation Shaft No. 3 issued and approved in terms of the NEMA. This report was compiled after completion of a site visit conducted on 29 June 2022.

2. LEGAL FRAMEWORK

2.1 NATIONAL ENVIRONMENTAL MANAGEMENT ACT (ACT 107 OF 1998) (NEMA)

Section 24N(7)(d) of NEMA requires that the holder and any person issued with an Environmental Authorisation must monitor and audit compliance with the requirements of the EMPr. Regulation 34 of the EIA Regulations, 2014 states that the holder of an environmental authorisation must, for the period during which the environmental authorisation and EMPr remain valid, ensure that compliance with the conditions of the environmental authorisation and the EMPr is audited and that an environmental audit report, prepared by an independent person, is submitted to the relevant competent authority, which in the case of Zibulo Colliery is the Department of Mineral Resources and Energy, Mpumalanga Regional Office. The above-mentioned environmental audit report must determine the ability of the EMPr to sufficiently provide

for the avoidance, management and mitigation of environmental impacts associated with the mining operation on an ongoing basis and the level of compliance with the provisions of EAs and the EMPr.

With the amendment of the EIA Regulations, 2014, on 7 April 2014, Regulation 54A was introduced. Regulation 54A (2) of the EIA Regulations, 2014 which has also been recently amended under Government Notice 517 under *Government Gazette* 44701 published on 11 June 2021, further states that: *“Where a right or permit issued in terms of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002) and the associated Environmental Management Programme or Environmental Management Plan approved in terms of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002) is still in effect after 8 December 2014, the requirements contained in Part 3 of Chapter 5 of these Regulations apply to such Environmental Management Programmes or Environmental Management Plans, and where (a) the audit or performance assessment cycle of the Environmental Management Programme or Environmental Management Plan exceeds five years, an audit report will be required to be submitted at least every five years commencing from the date of submission of the last audit, for the period during which the right or permit remains in effect; or (b) no audit or performance assessment requirement was set in the Environmental Management Programme or Environmental Plan, an audit report required to be submitted to the competent authority no later than 7 December 2021 and at least every 5 years thereafter for the period during which the right or permit remains in effect.”*

Zibulo Colliery's approved EMPr as mentioned above remains valid which was approved after 8 December 2014. Therefore, the requirements of Regulation 54A (2) read with Regulation 34(1) of the amended EIA Regulations, 2014 are relevant to the operations.

3. SCOPE AND PURPOSE OF THE ENVIRONMENTAL AUDIT

The purpose of this audit was to verify whether Zibulo Colliery UG complies with the requirements outlined in the EA and two EMPrs:

Environmental Authorisation:

Environmental Authorisation for the development of an activity, including structures and infrastructure at Zondagsfontein Coal Mine, Ogies, ref: 17/2/2/2 NK-7, dated 8 March 2010

Environmental Management Programs:

- Environmental Management Program for Mining Right or Zondagsfontein Colliery, ref: MP 30/5/1/2/2/305 MR, dated 14 July 2008
- Environmental Management Program for Construction of Ventilation Shaft No. 3 complex at Zibulo Underground Colliery, ref: MP 30/5/1/1/2/305 MR, approved 2 October 2018

Copies of any of these documents are available on request.

The environmental audit was conducted to determine the level of performance against compliance of the mining operation with the conditions of the issued EAs and approved EMPr. The audit was conducted to further determine the ability of the measures contained in the EMPr to sufficiently provide for the avoidance, management and mitigation of environmental impacts associated with Zibulo Colliery UG's mining operations and associated surface infrastructure and activities.

In view of the above, the scope of this compliance assessment is as follows:

- To report on the compliance of the mine with the conditions, commitments and/or mitigation measures in the EA and EMPrs and the extent to which the avoidance, management and mitigation measures provided for in the EMPr, achieve the objectives and outcomes of the EMPrs;
- To identify and assess any new impacts and risks arising from the Zibulo Colliery mining activities;
- To evaluate the effectiveness of the EMPrs,
- To identify any inadequacies in the EMPrs, and
- To identify the need for any changes to the avoidance, management and mitigation measures provided for in the EMPrs.

4. METHODOLOGY ADOPTED IN PREPARING THE ENVIRONMENTAL AUDIT REPORT AND DECLARATION OF INDEPENDENCE

4.1 AUDIT TEAM

Auditor: Mr. Ryan Nawn

Professional Registration Numbers:

SAATCA Lead Auditor Registration: E3471

IAIASa Membership

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Experience of the Auditor

Ryan Nawn holds a M.Sc. degree in Environmental Management from the then Rand Afrikaans University (presently University of Johannesburg). He has over twenty (20) years' working experience in environmental management. He is vastly experienced in the implementation, maintenance and auditing of Environmental Management Systems (EMS) and has conducted a wide range of environmental audits ranging from company internal audits, environmental authorisation audits, water use license audits, waste license audits and EMS surveillance and certification audits. Ryan is a registered ISO 14001 EMS Lead Auditor with the Southern African Auditor & Training Certification Authority (SAATCA) – one of only limited few in South Africa who is both an Environmental Assessment Practitioner and EMS Auditor. He also facilitates training courses in ISO 14001 – ranging from implementation, transition, and lead auditor courses on behalf of various certification bodies and training institutions.

Ryan has been involved in developing Environmental Management Plans for the green building industry and subsequent audits thereof. Significant experience has been gained in environmental compliance monitoring by working on large linear construction projects such as the Vaal River Eastern Sub-system Augmentation Project (VRESAP); the Olifants River Water Augmentation Project – Phase 2; as well as the Mokolo-Crocodile Water Augmentation Project – Phase 1 (MCWAP) in Lephalale. Relevant experience has also been gained in integrated environmental management processes such as Environmental Impact Assessments (EIAs) and Basic Assessment processes and Reports (BARs), and the development of EMPs. Mr Nawn has also been actively involved in public participation and community development processes. He has research experience in water quality and catchment management.

Mr. Ryan Nawn contracted in by Geovicon Environmental (Pty) Limited, hereby declares that he is an independent auditor and that Geovicon Environmental (Pty) Limited and himself have no business, financial, personal or other interest in this project in respect of which Geovicon Environmental (Pty) Limited is appointed. Furthermore, no circumstances exist that may compromise the objectivity of Geovicon Environmental (Pty) Limited, excluding fair remuneration for work performed in connection with this environmental audit.

4.2 FREQUENCY OF REPORTING

Reporting on the compliance of Zibulo Colliery UG against the conditions of the EMPs is conducted annually as per conditions they contain.

In terms of regulation 34(2)(d) of the NEMA EIA Regulations *“the environmental audit report contemplated in sub-regulation (1) must be conducted and submitted to the competent authority at intervals as indicated in the environmental authorisation”*. The NEMA environmental authorisation does

not indicate the auditing frequency. It was however decided by the mine that the EA also be audited at the same frequency as the EMPs.

4.3 PERIOD THAT APPLIES TO THIS COMPLIANCE ASSESSMENT

The audit review period for this environmental audit report is August 2021 to June 2022.

4.4 PROCEDURE USED DURING THE EXTERNAL AUDIT

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

- Desktop assessment of the approved EMPs and the NEMA EA. The desktop assessment was used to list all commitments and conditions indicated in the EMPs and the NEMA EA. Also, as part of the desktop assessment, the auditor utilised the previous audit reports completed by him in order to establish whether the mine's environmental legal performance has improved or not (i.e. has the mine progressed or regressed in its compliance status).
- The Environmental Audit was conducted by reviewing and abstracting the commitments (management and mitigation measures) from the approved EMPs and conditions from the approved EA. In cases where the commitments had not been fulfilled, such has been indicated in this report. As described further below, the auditor also had extensive virtual interviews with Zibulo's environmental officer and co-ordinator. These interviews were held over a period of three days.

A site visit was conducted on 29 June 2022 and was used to assess the compliance with the conditions and commitments of the EA and EMPs. The site visit was used to determine effectiveness of measures implemented to mitigate potentially negative environmental impacts, and measures to enhance positive impacts, which determined compliance of the operation with the conditions and commitments in the EA and EMPs. The use of site visits therefore allows the auditors to collect evidence thereby enabling them to verify whether the organisation complies to the audit criteria, viz. the relevant conditions of the EAs and EMPs.

4.5 EVALUATION CRITERIA USED DURING THE COMPLIANCE ASSESSMENT

Evaluation criteria used during the compliance assessment include the following:

- Are the measures and structures as indicated in the environmental management programmes and NEMA Environmental Authorisation in place?
- Are the measures adequate and structures maintained, and at what frequency?

- Has the monitoring as indicated in the environmental management programme and NEMA Environmental Authorisations been conducted? (Data, reports)
- Is the reported frequency of the monitoring in accordance with the environmental management programme and NEMA Environmental Authorisations? (Reports)
- Determining whether any new measures are required to prevent or mitigate the existing environmental impacts and/or other potential impacts.

Evaluation of the appropriateness and adequacy of the environmental management programme and NEMA Environmental Authorisations included the following:

- Compliance with relevant laws pertaining to the environment.
- Compliance of mining and associated activities with the EMPr and NEMA Environmental Authorisations. (Is the mine conducting activities that are not indicated in the EMPr and the Environmental Authorisations?)

4.6 RATING OF FINDINGS

The compliance category was rated as indicated in the table below.

Table 1: Compliance Categories

Compliance category	Findings
Condition/mitigation measure/commitment has been achieved with evidence provided in the form of a document.	Compliant
The operation failed to comply with, or satisfy the requirements of an applicable condition, commitment and/or mitigation measure. Non-compliances include instance, where although the current condition or mitigation measure has been achieved, there have been new impacts and risks arising from the activity; whether the current measures are effective and whether there are any shortcomings which need to be address through changes in the systems or amendment of the EA or EMPr.	Non-Compliant
The condition, commitment and/or mitigation measure is not applicable. A “Not Applicable” finding is also noted in events where such condition, commitment and/or mitigation measure is either obsolete, alternative effective measure is utilised or commitment	Not Applicable

Compliance category	Findings
and/or mitigation measure is not yet relevant but remains relevant for future activities.	
The condition, commitment and/or mitigation measure that does not require any specific action.	Noted

5. ASSUMPTIONS, UNCERTAINTIES AND GAPS IN KNOWLEDGE

Although all reasonable attempts were made to verify comments made during interviews held with the relevant Zibulo Colliery personnel as well as the review of documentation, it is assumed that such comments and documents provided are a true and accurate reflection of the audit.

In an event where insufficient information was provided to support the verification of compliance status, the auditors' general approach was to indicate that such commitments/conditions could not be verified, and as such, the findings were noted as non-compliant.

6. EMPR RECOMMENDATION REPORT

Regulation 34(4) of the EIA regulation, 2014 state the following:

Where findings of the Environmental Audit Report indicate:

- insufficient mitigation of environmental impacts associated with the undertaking of activity;
- insufficient levels of compliance with the Environmental Authorisation or EMPr and where applicable the closure plan;

the holder must when submitting the environmental audit report to the competent authority in terms of sub regulation (1), submit recommendations to amend the EMPr or closure plan in order to rectify shortcomings identified in the environmental audit report and such recommendations must have been subjected to a public participation process as agreed to by the competent authority.

7. RESULTS OF THE EXTERNAL AUTHORISATION AND EMPRS AUDIT

The results of the Environmental Audit are given in the Tables below. The tables below outline the EMPrs and the EA of the authorised activities at Zibulo Colliery.

7.1 ENVIRONMENTAL MANAGEMENT PROGRAMME INCLUDING EIA REPORT AND I&AP COMMENTS, MINING RIGHT APPLICATION ZONDAGSFONTEIN COLLIERY (MP 30/5/1/2/2/305 MR), DATED 14 JULY 2008

Condition number	Management Measure	Mitigation Measures	Finding	Observation/ Audit Evidence
1.1.	Keep a record of geological structures encountered with respect to the groundwater characteristics.	The application of stone dust on underground coal pillars. No additional mitigation measures are proposed.	Compliant	Stone dusting is undertaken on coal pillars to control coal dust explosions. This is done on a daily basis and forms part of the control of safety and ventilation (ensuring clean air and reducing explosion potentials) of underground mining operations. Evidence of the coal dust silo adjacent to the ventilation fans was verified during the on-site visit.
1.2.	The control of declared weeds and invaders within the areas associated with the infrastructure should be maintained.	The control of declared weeds and invaders within the areas associated with the infrastructure will be maintained.	Compliant	An alien invasive assessment has been undertaken and ongoing eradication remains part of the mine's maintenance activities done by the mine's recently appointed rehabilitation specialists, D&G. This local supplier has been appointed for a 3-year period. The mine has an <i>Alien Invasive Plan survey, mapping, identification and eradication</i> document which was completed in January 2013. The mine's personnel, and this contractor conduct regular site inspections with regard to alien and weed hotspots and control thereof. Collaboration with neighbouring landowners also forms part of the drive towards such eradication where physical eradication with their tractors and equipment is undertaken.
1.3.	To minimise the impact on catchment yield.	The use of berms to keep clean water out of the shaft areas is considered the primary mitigation measure for reducing the impact on catchment yield.	Compliant	Berms and cut-off trenches are utilised at the incline shaft to prevent the surface water runoff from entering the shaft area. Furthermore, storm water channels are in place at the Man-Materials (vertical) Shaft to direct the contaminated surface water runoff towards the 7.5 MI Dam. On-site visits revealed that drainage channels are also present upslope of the vertical shaft and workshop area, to direct all clean runoff to the environment.
1.4.		Re-use of dirty water to the extent that no positive balance is predicted for the life of mine.	Compliant	The underground section of Zibulo Colliery maintains its water balance through the implementation and monitoring of a water management system, known as SCADA. Underground water is piped to the PCDs from where it is pumped to the Phola Processing Plant's Balancing Dam, situated 32 km away. From here coal washing is undertaken and some of the used water is pumped back to Zibulo, whilst the rest is pumped to the Opencast mine of Zibulo through a water exchange program. Excess water ultimately ends up being piped to the eMalahleni Water Reclamation Plant ("EWRP") south of Witbank for further treatment.
1.5.	To identify and control surface water runoff that may be affected by mining, as well as the water balance associated with the mining operations, and to ensure the risk of spilling of this water to the clean catchment is: - In line with licensing requirements; - In line with legislative requirements; and - Commensurate with the risks to downstream users associated with this spillage. This is taken currently at a 2% risk in any one year, or the 1:50 year rainfall occurrence.	Construction of water management containment facilities sized to ensure a lower than 2% risk of spilling in any one year, based on the water reuse volumes given in the water balance. The combination of limited above ground storage (15 ML) and storage underground (4300 ML from Year 8) has been shown to be adequate to ensure a 2% or lower risk in any one year.	Compliant	The 7.5 MI Dam as well as the 20 MI have been designed to have sufficient capacity with a freeboard of 0.8 m. Site observations confirmed that the dams are operated with a freeboard greater 0.8 m. This is due to a pipeline that is in place to pump affected water from the 20 MI Dam to Zibulo Colliery Opencast Colliery ("Zibulo Colliery OC"), via the Phola Plant. Water can either be taken off the line, directly to Phola Plant for use in the process (as per agreement between Phola Plant and Zibulo Colliery), or mine affected water from the 40 MI Dam at Zibulo Colliery OC can be pumped to the EWRP for treatment. The dam levels are also monitored on a live system with level sensors. In the event that one of the dams reaches full operational level, pumping commences with the water from 7.5 MI Dam to 20 MI Dam, and <i>vice versa</i> , or from the 20 MI Dam to the Zibulo Colliery OC 40 MI Dam. Daily water reports were made available during the audit.

Condition number	Management Measure	Mitigation Measures	Finding	Observation/ Audit Evidence
1.6.		Provision for monitoring of both the water balances and management of the water balance, as well as upstream and downstream river qualities to ensure that the above is achieved.	Compliant	As already described, the mine's water reticulation system is monitored and managed with the aid of a SCADA system. Flow meter data as well as level sensor (implemented at the 7.5 MI Dam and the 20 MI Dam) data are inputs to the SCADA system that allows for the instantaneous and constant monitoring of the mine's water balance. A system to manage the balancing between the 7.5 MI Dam and the 20 MI Dam has further been implemented whereby the mine affected water between the two dams, can be balanced to maintain their respective capacity. As described above and in accordance with the mine's water balance, mine affected water from the 20 MI Dam is also pumped, via the Phola Plant, to the Zibulo Colliery OC 40 MI Dam when required. Mine affected water from the pipeline can also be taken offline directly to Phola Plant for use in the process. Mine affected water from the Zibulo Colliery OC 40 MI Dam is also pumped to the EWRP for treatment. External consultants Golder Associates is provided with a water quantities sheet known as a "Water Accounting Framework" (WAF). This is done on a monthly frequency and the consultants in turn develop the water balance report provided to Zibulo. Water quality monitoring is conducted by an external specialist i.e. Aquatico, where monthly, quarterly (groundwater included here), bi-annually (biomonitoring) and annual monitoring and reporting applies.
1.7.	Over the LoM any discharge from the mine would be in accordance with any licence that may be issued by the mine by the Department of Water and Sanitation and managed by them. The only situation for which mine discharge is currently envisaged would be in the event of extreme rainfall in excess of the 1:50 year recurrence interval flood, and even in these circumstances, it is unlikely that the mine would have to discharge.	Based on the successful implementation of the water management containment facilities, it is assessed that there will be no greater than a 2% risk of spilling to the river at any time during the LoM.	Noted	This is noted by the mine. Mitigation measures have not been provided in this condition.
1.8.		All of the coal will be contained with structures such as bunkers, or areas with concrete bunding. There will therefore be no coal stored on unprotected soil, although the potential for windblown coal dust cannot be excluded, and is in fact highly likely.	Compliant	Site visits indicated that coal storage takes place on site within the 6 000-ton cement silo. This provides a buffer for coal mined from underground <i>en route</i> to the crusher and conveyor to the Phola Plant. An emergency product stockpile area is provided for adjacent to the silo on an impermeable concrete surface. Zibulo reports that this facility has never needed to be used.
1.9.	To prevent impacts on water quality.	The workshops will be provided with their own oil skimming and containment facilities, including concrete sumps and associated measures. The expectation is that there will be little to no spillage from these areas.	Compliant	Contaminated or dirty water from the workshops is pumped to an oil storage container for collection by the external contractor namely ikhwekhwezi Oil. Other oil contaminated waste, such as rags are collected by an external contractor - TL Ideas, who transport and dispose of waste at the Holfontein Hazardous waste landfill facility. Safe Disposal Certificates are available. Previous <u>site observations</u> revealed that the container is bunded and an oil sump forms an integral dirty water management component at the workshops.
1.10.		All of the above areas will also be contained within the dirty water area, comprising bunding around the facilities to keep clean water off the site, as well as a dirty water dam to collect runoff from the shaft areas.	Compliant	The storm water management at Zibulo Colliery UG has been implemented in accordance with the <i>Surface Water Flood Risk Management Plan for Zibulo Opencast and Underground Collieries</i> as compiled by Golder Associates. Dirty water is transferred to the 20MI Dam from where it is transferred to the Erikson Dam – or Phola Processing Plant; whilst clean

Condition number	Management Measure	Mitigation Measures	Finding	Observation/ Audit Evidence
				water is supposed to be released to a wetland in the south. However, the 7.5 ML facility has high silt loads and desilting of the facility is required in recent times. Quotations have been sourced to undertake the works which have recently commenced in May 2022. Silts dredged are trucked to the Opencast Pit. The mine was planning to appoint a contractor for this work in the near future currently busy with this.
1.11	To prevent the potential for spillage to occur from conveyors.	Conveyors will be fully enclosed where they cross streams.	Compliant	Doghouse sheeting encloses the conveyer to the 2000 ton silo of the Phola Plant, and all wetland crossings are enclosed as part of the prevention of coal spillages into the water courses (not only across water course crossings). It was noted that there are six wetland crossings. The external security contractor (Thorburn) inspects the entire length of the overland conveyer on a regular basis throughout the day to ensure that the conveyer is operational, for security purposes as well as to ensure that no spillages from the conveyer are occurring. Zibulo Colliery UG has also implemented the <i>Zibulo Spill Handling Procedure (Doc No. AATC003255), latest revision dated 12 October 2017</i> , that stipulates the procedure to be followed in the event of a spill. The cleaning of the conveyer forms part of the Service Engineering Department who in turn source a contractor to collect coal spills.
1.12		The conveyor belts will be kept gentle over the river crossings to minimise potential collection of water at the low point of the conveyor, should wet coal be placed on the conveyor belt.		
1.13		Regular inspections of stream crossings and the remainder of the conveyor servitude will be undertaken and any coal spillages cleaned up.		
1.14.	Ensure the downstream water quality criteria are both understood and complied with in terms of the mine's potential impact on the environment.	All shafts will be located outside of the 1:100 year floodline.	Compliant	Shaft areas are situated outside the 1:100 year floodlines as confirmed by the <i>Surface Water Flood Risk Management Plan for Zibulo Opencast and Underground Collieries</i> compiled by Golder Associates originally in 2015 and recently updated.
1.15.		Shafts will be protected against extreme events by means of flood protection berms.	Compliant	Berms and cut-off trenches are integral to the incline shaft's design. Stormwater channels are also in place at the vertical shaft to direct the contaminated surface water runoff towards the 7.5 MI Dam. Drainage channels are also present upslope of the vertical shaft and workshop area, to direct all clean runoff to environment.
1.16		Over the life of the mine, any discharge from the mine would be in accordance with any licence that may be issued to the mine by the Department of Water and Sanitation and managed by them.	Compliant	The mine does not have a controlled release permit and discharge is not allowed as per the WUL (04/B11E/CGIJ/692). During the previous audits of 2020 and 2021 it was found that a subsurface stormwater pipe has been laid up to the overflow release point of the dam. The potentially contaminated water was then released to the adjacent wetland to the south. It was however found during the latest site visit that, despite this pipe having been removed, and no discharge into the wetland, the cleaned-out contaminated debris at the wetland was yet to be removed from the area – a year after it was placed next to the channel.
1.17		The incline shaft and overburden stockpile will be located on high ground well away from watercourses.	Compliant	The incline shaft and overburden stockpile (rock dump) are located well away from watercourses and the 1:100-year floodlines as per site observations and the <i>Surface Water Flood Risk Management Plan</i> recently updated by Golder Associates.
1.18.	To prevent release of excess water from underground.	Influxes encountered during the intersection of the graben and dykes in the underground workings will be used as part of the operations.	Compliant	Mine affected water from underground is pumped to the 7.5 MI Dam after it is transferred to the 20 MI Dam ("PCD"). Water from here is stored and also used for dust suppression purposes.
1.19.		Excess water will be pumped to the dirty water dams.	Compliant	Mine affected water is then transferred to the Zibulo Colliery OC's 40 MI Dam from where it is pumped to the EWRP. Phola Plant can further take affected water from Zibulo Colliery transfer pipeline (as per agreement between Phola Plant and Zibulo Colliery). Treated water from the EWRP is

Condition number	Management Measure	Mitigation Measures	Finding	Observation/ Audit Evidence
				then received from the Phola Plant for use as potable water.
1.20.		Barrier pillars of 100m should be left between all adjacent mining sections to prevent the migration of groundwater to low lying areas, during the operational phase.	Not Applicable	<p>The mine explained that 31 m is kept from the inside of the mine boundary – and this is based on the Mine Occupational Health & Safety Act. This allows for the mine to still be within the 15 m distance if they are ‘off’ with one cutting cycle (a cutting cycle is 16 m wide).</p> <p>Barrier pillars that are 100 m wide are therefore not kept between adjacent mining sections and this commitment cannot be adhered to. The 31 m distance is kept as a safety and geotechnical rule. Zibulo Colliery UG has also developed and implemented the following procedures and codes of practices regarding pillar design:</p> <ul style="list-style-type: none"> • Zibulo pillar design formula standard (AATC013936); and • Zibulo Colliery Mandatory COP to combat roof fall accidents un UG coal mines (AATC016395). <p>It was further indicated that the requirement for 100 m barrier pillars is neither practical nor economical to implement.</p> <p>Whether groundwater is migrating to low lying areas could not be confirmed at the time of the audit.</p> <p>This condition is one of the conditions a request for amendment has been applied for. The initial hard copies were submitted to the DMRE on 2 October 2020, after which the mine also re-submitted the application 18 November 2020 upon request of the Department. The DMRE visited the Opencast and Underground sections of the mine in February 2022. The Department verbally made mention that it does not agree to amending these matters. Further written response from the Department is still awaited.</p>
1.21.		Continuous communication with other mine owners is encouraged to qualify and quantify all water make/water flow, not only during the Life of mine of adjacent sections, but for defunct operations as well.	Compliant	Zibulo Colliery indicated that it is a member of the Upper Olifants River Catchment Management Forum, which consists of different stakeholders in the Olifants catchment, and attends meetings on invitation from the DWS. The mine forms part of the Rietspruit Water Management Forum and attends the forum’s meetings – the last meeting being 14 November 2019 at the Kriel Colliery (2 ½ years ago due to the Covid-19 pandemic restrictions the past while).
1.22.	Reduce the quantity impact on surrounding water users.	Continuous monitoring of external user’s boreholes and monitoring boreholes at the graben structure will indicate whether a loss in yield has taken place due to mining activities.	Compliant	<p>Water monitoring at Zibulo Colliery UG is conducted in accordance with the <i>Zibulo Water Monitoring Procedure (AATC016632)</i>. In accordance with the water monitoring procedure, groundwater level monitoring is conducted on a quarterly basis and the results thereof included in the water quality assessments reports.</p> <p>Groundwater level monitoring is only conducted on the mine’s boreholes and not at external users’ boreholes (some boreholes are on adjacent land) or at the graben structure. Boreholes on surface rights land are monitored.</p>
1.23.		Alternative supplies of water to replace impacted borehole yields will be negotiated with affected groundwater users, based on a structured compensation protocol.	Compliant	Alternative water supplies to replace impacted borehole yields have never been required according to the mine. Complaints have also not been received from surrounding landowners. It was also noted that the mine displays <i>Community Complaints Process</i> posters for all to view. It includes contact details (telephone, e-mail and complaints form) for a community member to raise their concern.
1.24.	Reduce impact on stream baseflow.	Maintain adequate pillar safety factors to prevent surface	Compliant	The underground bord and pillar mining method is being employed at Zibulo

Condition number	Management Measure	Mitigation Measures	Finding	Observation/ Audit Evidence
		subsidence.		Colliery UG and has a low risk of wall collapse.
1.25.	Reduce impact on surrounding groundwater quality.	Remove mine water make to the dirty water dams as soon as possible to prevent contact with mine surfaces that will cause deterioration of quality. Use mine water for mining purposes.	Compliant	Mine dewatering is undertaken on a continuous basis for the safe continuation of mining as well as to prevent further contamination of the water. Mine affected water from underground is pumped to the 7.5 MI Dam after it is transferred to the 20 MI Dam ("PCD"). Water from the 7.5 ML dam is stored and also used for dust suppression purposes (as well as the Erikson Dam). Mine affected water is then transferred to the Zibulo Colliery OC's 40 MI Dam from where it is pumped to the EWRP. Phola Plant can further take affected water from Zibulo Colliery transfer pipeline (as per agreement between Phola Plant and Zibulo Colliery). Treated water from the EWRP is then received from the Phola Plant for use as potable water.
1.26.	Prevent seepage or spillages from dirty water dams and other surface structures.	Ensure continuous recycling of water from the dirty water dams to prevent an accumulation of very poor quality water.	Compliant	As previously described, mine affected water from underground is pumped to the 7.5 MI Dam after it is transferred to the 20 MI Dam ("PCD"). The 7.5 ML facility was being desilted at the time of the audit. Water from here is stored and also used for dust suppression purposes. Mine affected water is then transferred to the Zibulo Colliery OC's 40 MI Dam from where it is pumped to the EWRP. Phola Plant can further take affected water from Zibulo Colliery transfer pipeline (as per agreement between Phola Plant and Zibulo Colliery). Treated water from the EWRP is then received from the Phola Plant for use as potable water
		Install toe drains at the dirty water dams to intercept most of the seepage and monitor groundwater quality down-gradient of the dirty water dams.	Not Applicable	The PCDs are impermeable as they are lined, and therefore toe drains are not required. Seepage from the PCDs have not been recorded at the mine.
1.27.		Line the silos, crushing facilities and workshops.	Compliant	The Zibulo Colliery UG workshops and shaft are located on a cement lined surface with drainage channels to divert all contaminated surface water runoff towards the silt traps and into the 7.5 MI Dam.
1.28		Capture any surface run-off from these facilities and manage as polluted water.	Compliant	The silo and the secondary crusher are located on impermeable cement lined surfaces. Contaminated surface water runoff from the silo area is directed towards the No.2 and No. 3 Silt Trap before entering the main dirty water channel that directs the contaminated water towards the No. 5 and No. 6 Silt Trap and into the 7.5 MI Dam. The secondary crusher is located on a cement lined surface with all affected surface water directed to No.1 Silt Trap. Mine affected water from No.1 Silt Trap is then pumped to the main dirty water dirty water channel that flows to the 7.5 MI Dam.
1.29.	To minimise dust during the operational phase.	The coal silo design will include a cover to prevent coal dust dispersion.	Compliant	The 6 000-ton silo is a cement silo with a roof to prevent dust dispersion and the contamination of rainwater.
1.30.	To keep noise levels below the maximum recommended level of 45 dBA at night and 55 dBA during the day and the increase in noise level to 7 dBA for both instances.	The eastern side of the conveyor will be enclosed with a Doghouse enclosure.	Compliant	The length of the conveyor is covered with doghouse sheeting, however, the doghouse sheeting only encloses the top and western side of the conveyor, with the eastern side of the conveyor open for inspection purposes and to ensure safety during maintenance activities. In other words, covering the eastern side poses a safety risk and the non-cover has no environmental impact. Among others, this is evident from the fact that there are no complaints regarding noise which have been reported for this part of the mine (for these reasons the auditors did not rate this matter as a non-compliance). This condition is one of the conditions a request for amendment has been applied for. The initial hard copies were submitted to the DMRE on 2 October 2020, after which the mine also re-submitted the

Condition number	Management Measure	Mitigation Measures	Finding	Observation/ Audit Evidence
				application 18 November 2020 by request of the Department. Response from the Department is still awaited. The DMRE visited the Opencast and Underground sections of the mine in February 2022. The Department verbally made mention that it does not agree to amending these matters. Further written response from the Department is still awaited.
1.40.		A wall adjacent to Mr Allen's house will be implemented during construction. A noise barrier will be constructed to be 2m above the vent shaft fans at Rietvlei to mitigate the impact on Mr Koos Boshoff's house.	Not Applicable	According to mine personnel, a wall has not been constructed for Mr. Allen due to the fact that the risk of impact to him is low. The mine also confirmed that no ventilation shaft was constructed at Rietvlei, therefore, the commitment to construct a noise barrier at Mr. Boshoff's house is not applicable. Both Mr Allen and Mr Boshoff works for the mine. This condition should be amended since these interventions are no longer required. This condition forms part of the latest amendment application.
1.41.		Once the conveyor is operational, the ambient noise levels will be re-assessed and machined rollers implemented over sections where particular problems are encountered. This approach is deemed suitable because some sensitive receptors may be relocated as part of land purchases for mining in the area.	Compliant	A noise assessment study was conducted by the National Air Pollution Assessment Services ("NAPAS") in 2005 and later in 2013. Machined rollers were introduced to the conveyor system. Complaints regarding noise have not been reported for this part of the mine.
1.42.	To reduce the visual impacts from the mining infrastructure.	Visual impacts will be mitigated by revegetating disturbed areas once construction is completed and by using a light or cool khaki-coloured paint on structures except the silo will remain a concrete colour since the painting will have little impact.	Compliant	Site inspections showed that the rock dump at the incline is vegetated while structures such as the shaft, silo and conveyor are painted with natural colours to blend into the environment.
1.43.	To enhance potential positive social impacts and minimise any potential negative social impacts.	Undertake recruitment in the local communities through a well-advertised, transparent, off-site employment process to avoid attracting squatters to the site and to reduce tensions around employment in the local community.	Compliant	The Social and Labour Plan ("SLP") was compiled in terms of the MPRDA for the envisaged life of mine at Zibulo Colliery UG. The SLP outlines the mine's plans and objectives in terms of Human Resource Development, Local Economic Development and the management of downscaling and retrenchments. The mine does recruitment of personnel within the local community as far as possible in accordance with the SLP. Recruitment is managed and guided by a Social Performance Specialist Ms Fikile Mokoena of the community department of the mine. Contractors' Packs also scrutinised for local employment. It was explained that Environmental, Social and Governance (ESG) also adhere to these objectives having made appointments from local areas. Statistics regarding this is tracked by the mine and Head Office on a monthly basis.
1.44.		The SLP and Corporate Social Investment policies followed by the mine could further boost local communities and local economy by assisting communities to make most use of the additional money coming into the community through wages.	Compliant	Thungela Resources Coal has a Social Hub known as Thutuka, where small loans are offered to communities. Zibulo continues working closely with all stakeholders and oversees the sustainability of community investments. The mine focuses on appointing local service providers when recruitments and contracts are implemented.
1.45.		A database of local service providers should be drawn up as a part of the SLP and Corporate Social Investment strategies. This database can be used by mine employees and contractors to work on the mine but can also be made more wide spread to cover other existing and planned developments.	Compliant	Zibulo Colliery has initiated a drive whereby only local service providers are used. Should no local providers be available to provide specialised services, such providers are sourced from the wider area. A database of local service providers has been developed and is included into Zibulo Colliery UG's procurement policy. A 50 km radius around the mine is considered to be local.
1.46.		It is the responsibility of Anglo Inyosi Coal (Pty) Limited to ensure that their employees and contractors are made aware of the issues surrounding the spread of HIV and	Compliant	Thungela Resources, through the Chairman's Fund, has formed public private partnerships to encourage the youth in developing positive life skills that are aimed at reducing the spread of sexually transmitted diseases and

Condition number	Management Measure	Mitigation Measures	Finding	Observation/ Audit Evidence
		Aids in the area. This awareness can be promoted by initiatives such as training and development, peer education, community interventions and visual awareness campaigns, to name but a few.		HIV / AIDS. Voluntary testing of STD's and HIV is offered on an annual basis as well as counselling to affected parties. Individuals participating in the voluntary testing are awarded. In August 2002, the then Anglo American announced its intention to make anti-retroviral treatment available to HIV positive employees who are at the stage of infection where ART is most effective. This initiative is still continuing.
1.47	To prevent the deterioration of roads and promote the safety on users thereof.	Warning signs indicating to other road users that large vehicles may be on the road should be erected where appropriate. Consideration should be given to constructing dedicated deceleration lanes.	Compliant	No large vehicles use the road as coal is conveyed by conveyor to Phola Plant. Equipment and large vehicles remain underground. However, where relevant, warning signs have been erected. Deceleration lanes were constructed at the turn-off to the Zibulo Colliery UG. The speed limit on the mine's footprint is 40 km/h.

MANAGEMENT MEASURES FOR THE DECOMMISSIONING AND CLOSURE (DURATION: 5 YEARS)

Condition number	Management Measure	Mitigation Measures	Finding	Observation/ Audit Evidence
2.1.	No additional impacts on the geology are incurred as a result of the decommissioning or closure activities.		Not Applicable	This EMPr commitment is not yet applicable as Zibulo Colliery UG is in the operational phase and such EMPr commitment refers to decommissioning activities.
2.2.	No management or mitigation measures identified in the EMPr.		Not Applicable	This EMPr commitment is not yet applicable as Zibulo Colliery UG is in the operational phase and such EMPr commitment refers to decommissioning activities.
2.3.	No management or mitigation measures identified in the EMPr.		Not Applicable	This EMPr commitment is not yet applicable as Zibulo Colliery UG is in the operational phase and such EMPr commitment refers to decommissioning activities.
2.4.	No management or mitigation measures identified in the EMPr.		Not Applicable	This EMPr commitment is not yet applicable as Zibulo Colliery UG is in the operational phase and such EMPr commitment refers to decommissioning activities.
2.5.	No management or mitigation measures identified in the EMPr.		Not Applicable	This EMPr commitment is not yet applicable as Zibulo Colliery UG is in the operational phase and such EMPr commitment refers to decommissioning activities.
2.6.	No management measures identified in the EMPr.	The control of declared weeds and invaders within the areas associated with the infrastructure area should be maintained.	Not Applicable	This EMPr commitment is not yet applicable as Zibulo Colliery UG is in the operational phase and such EMPr commitment refers to decommissioning activities.
2.7.	No management measures identified in the EMPr.	None required.	Not Applicable	This EMPr commitment is not yet applicable as Zibulo Colliery UG is in the operational phase and such EMPr commitment refers to decommissioning activities.
2.8.	No management measures identified in the EMPr.	All rehabilitation earthworks and work in water courses must occur during the dry season with seeding of the areas taking place just before the rainy season commences.	Not Applicable	This EMPr commitment is not yet applicable as Zibulo Colliery UG is in the operational phase and such EMPr commitment refers to decommissioning activities.
2.9.	No management measures identified in the EMPr.	Monitor the water level in the mine.	Not Applicable	This EMPr commitment is not yet applicable as Zibulo Colliery UG is in the operational phase and such EMPr commitment refers to decommissioning activities.
2.10	No management measures identified in the EMPr.	Undertake pile and gantry removal during the dry season.	Not Applicable	This EMPr commitment is not yet applicable as Zibulo Colliery UG is in the

Condition number	Management Measure	Mitigation Measures	Finding	Observation/ Audit Evidence
				operational phase and such EMPr commitment refers to decommissioning.
2.11	No management measures identified in the EMPr.	It is not envisaged that any infrastructure will remain on site during decommissioning. This does not exclude the potential construction of water management measures prior to decant occurring from the site, but again this is only expected a considerable time after closure. To mitigate the potential erosion and increase in suspended soils, all final slopes around the shaft area will be 1:7 or flatter, with general slopes over the topography of 1:10 or flatter targeted. This would address the issues such as clean overburden potentially remaining on the surface. Furthermore, where required, contour drains will be constructed to limit the flow length down the steep slopes, and grassing undertaken on the slopes. Water quality monitoring and rehabilitation monitoring will be implemented during the decommissioning phase to establish the success of final rehabilitation, and to determine any shortcomings.	Not Applicable	This EMPr commitment is not yet applicable as Zibulo Colliery UG is in the operational phase and such EMPr commitment refers to decommissioning activities.
2.12.	No management measures identified in the EMPr.	Compensation measures will remain in place.	Not Applicable	This EMPr commitment is not yet applicable as Zibulo Colliery UG is in the operational phase and such EMPr commitment refers to decommissioning activities.
2.13.	No management measures identified in the EMPr.	Apply water to haul roads.	Not Applicable	This EMPr commitment is not yet applicable as Zibulo Colliery UG is in the operational phase and such EMPr commitment refers to decommissioning activities.
2.14.	No management measures identified in the EMPr.	Undertake rehabilitation activities during daylight hours.	Not Applicable	This EMPr commitment is not yet applicable as Zibulo Colliery UG is in the operational phase and such EMPr commitment refers to decommissioning activities.
2.15.		No impact.		
2.16.		No impact.		
2.17.	No management measures identified in the EMPr.	None possible.	Not Applicable	This EMPr commitment is not yet applicable as Zibulo Colliery UG is in the operational phase and such EMPr commitment refers to decommissioning activities.
2.18.	No management measures identified in the EMPr.	The process of retrenchment should include counselling for staff members on opportunities and risks involved in the retrenchment process. This is particularly important at the end of mine life but is a system that should be in place throughout the life of mine. The following should be included in this counselling: • Opportunities for investment • Guidance on small business start up opportunities • Career guidance on how to best prepare for alternative employment opportunities.	Not Applicable	This EMPr commitment is not yet applicable as Zibulo Colliery UG is in the operational phase and such EMPr commitment refers to decommissioning activities.
2.19.	No management measures identified in the EMPr.	The loss of jobs is inevitable in the case of mine closure an cannot be avoided however programmes put into place can aid workers to make the best of the situation. It is vital that during the life of mine workers are given the opportunity to better formalise their skills in order to aid their attempts to find alternative employment. The mine	Not Applicable	This EMPr commitment is not yet applicable as Zibulo Colliery UG is in the operational phase and such EMPr commitment refers to decommissioning activities.

Condition number	Management Measure	Mitigation Measures	Finding	Observation/ Audit Evidence
		<p>should also investigate the possibility of giving workers earmarked for retrenchment the opportunity to learn a new skill or trade not necessarily one directly related to the mining industry. In addition to this it is vital that at all times but particularly towards the end of mine life that issues around retrenchment are dealt with in a transparent manner. All workers must know where they stand with regard to employment, what processes will be followed in the event of retrenchment and what services are available to them in this regard.</p>		

7.2 BASIC ASSESSMENT REPORT AND ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT FOR CONSTRUCTION OF THE VENTILATION SHAFT NO. 3 COMPLEX AT ZIBULO UNDERGROUND COLLIERY (MP 30/5/1/1/2/305 MR)

Impacted Aspect	Condition	Finding	Observation/ Audit Evidence
POTENTIAL DIRECT IMPACTS ON BIODIVERSITY			
<i>Biodiversity</i>			
<i>Pre-Construction phase</i>			
<i>Biodiversity</i>	All development footprint areas and areas affected by the proposed infrastructure development should remain as small as possible and should not encroach onto surrounding more sensitive areas. It must be ensured that these areas are off-limits to construction vehicles and personnel.	Compliant	Site visits showed that that the silo site is situated within the confines of other existing features and infrastructure of the site.
	No activities are to infringe upon these sensitive areas.	Compliant	Site visits showed that the site encroached into mealie fields and no floral sensitivities were present.
	The boundaries of the development footprint areas are to be clearly defined and it should be ensured that all activities remain within defined footprint areas.	Not Applicable	The development footprint area falls within the larger demarcated / fenced off mining sites. The Ventilation Shaft 3 construction has already been completed.
	The proposed development footprint areas should remain as small as possible.	Not Applicable	Site visits showed that the silo site is situated within the confines of other existing features and infrastructure of the site. Ventilation Shaft 3 has already been constructed and provision of 2 Ha was made for construction phase, however construction activities were confined to 1 Ha.
	Any threatened species, or nationally or provincially protected floral species will be disturbed, ensure effective relocation of individuals to suitable similar habitat.	Compliant	Previous site visits showed that the site encroached into mealie fields and no floral sensitivities were present.
	No trapping or hunting of fauna is to take place and access control into sensitive areas must be implemented to ensure that no illegal trapping or poaching takes place.	Compliant	No trapping or hunting is permitted at Zibulo Colliery according to the induction slides used for induction purposes. All employees and contractors to Zibulo Colliery are also required to undertake mandatory induction. Induction applies to all new employees to the mine, visitors and to all employees that have been away from the site for two weeks duration or longer. Every 18 months an individual would have at least been re-inducted.
<i>Construction phase</i>			
<i>Biodiversity</i>	During construction, and if necessary, drift fences constructed from hessian sheets could be installed at erodible areas to minimise erosion.	Not Applicable	The mine runs a Felt Leadership Indicators (FLI) [previously referred to as Visible Field Leadership (VFL)] program where environmental enhancement is strived for. Past records of VFL include evidence of erosional activity requiring mitigation is pointed out. Construction activities of the ventilation shaft are complete but initial works were underway on site for a borehole to be established.
	The boundaries of the development footprint areas are to be clearly defined and it should be ensured that all activities remain within defined footprint areas.	Non-Compliant	As described above, Ventilation Shaft 3 construction activities are complete. It was however noted that a stone dust silo had been erected adjacent to the Ventilation Shaft No.3 facility and another more recently. This infrastructure and associated activities are resulting in stone dust being spilled and blown beyond the confines of the silo sites. It was therefore noted that stone dust was being spilled into the surrounding environment.
	The proposed development footprint areas should remain as small as possible.	Not Applicable	Site visits showed that the silo site is situated within the confines of other existing features and infrastructure of the site. Ventilation Shaft 3 has already been constructed and provision of 2 Ha was made for construction phase, however construction activities were confined to 1 Ha.
	If any threatened species, or nationally or provincially protected floral will be disturbed, ensure effective relocation of individuals to suitable similar habitat (refer to management measures associated with the relocation of trees during pre-construction phase).	Not Applicable	Construction of the Ventilation Shaft 3 was completed, and the facility is in operation rendering this requirement as not being applicable at the time of the audit. Previous site visits showed that the site encroached into mealie fields and no floral sensitivities were present.

Impacted Aspect	Condition	Finding	Observation/ Audit Evidence
<i>Operation phase</i>			
Biodiversity	It must be ensured that mining related waste or accidental spillage do not affect the sensitive habitat boundaries during operation and maintenance activities.	Non-Compliant	The previous and most recent audit revealed an issue of water from the UG operation being drawn up via the upcast vent fan system (Vent fan 3). The vent fan system draws air from the UG sections as part of the overall ventilation system. The mine has since installed a water ring which is supposed to direct all this water back to the UG operation. It was however found during the audit that this installation is proving to be ineffective and as such the condensate water from underground is flowing into the surrounding environment. The mine has commenced with borehole drilling with the objective is to return this condensate water back to groundwater. A contractor has been appointed to continue with this work.
	Removal of the alien and weed species encountered on the property must take place in order to comply with existing legislation (amendments to the regulations under the Conservation of Agricultural Resources Act, 1983 and Section 28 of the NEMA, 1998). Removal of species should take place throughout the operational phase.	Compliant	Alien vegetation is eradicated on a regular basis.
	No trapping or hunting of fauna is to take place and access control into sensitive areas must be implemented to ensure that no illegal trapping or poaching takes place.	Compliant	No trapping or hunting is permitted at Zibulo Colliery. All employees and contractors to Zibulo Colliery are also required to undertake mandatory induction. Induction applies to all new employees to the mine, visitors and to all employees that have been away from the site for two weeks duration or longer.
<i>Rehabilitation phase</i>			
Biodiversity	No impacts.	Not Applicable	No mitigation measure has been provided.
POTENTIAL DIRECT IMPACTS ON SURFACE WATER			
<i>Pre-Construction phase</i>			
Surface Water	Areas that are to be stripped of vegetation in preparation for the development and construction of infrastructure must be kept to a minimum.	Not Applicable	Photographic evidence shared during the previous audit as well as use of aerial imagery showed that the site encroached into mealie fields and no floral sensitivities were present. The site is in operation and construction has been completed.
	Stormwater runoff will be handled on surface areas to be cleared as part of the preconstruction phase and directed towards natural watercourses.	Not Applicable	The site is in operation and construction has been completed. Photographic evidence shared during the previous audit as well as use of aerial imagery shows that surface water runoff from the construction areas is directed to the adjacent clean water system, although noted that the surrounding areas are that of a mealie field.
	Site clearing will be undertaken during the dry season, where possible, to minimise the potential for stormwater runoff.	Not Applicable	The site is in operation and construction has been completed.
	Routine surface water quality monitoring up and down stream of clearing activities and position of infrastructure and activities associated with the proposed project will be undertaken on a monthly basis in accordance with the Water Monitoring Plan of Zibulo Colliery.	Not Applicable	This requirement forms part of an amendment application to the Department to amend the requirement or remove it. This commitment is not applicable as the nearest surface water resources is approximately 1 km away from the area and the surrounding areas are that of agricultural areas (maize).
<i>Construction phase</i>			
Surface Water	Minimise stormwater runoff through undertaking construction activities during dry season.	Not Applicable	The site is in operation and construction has been completed. It is reported that most of the construction took place during the dry season of 2019.
	Cement mixing will be conducted off site.	Not Applicable	Construction of the Ventilation Shaft 3 was completed, and the facility is in operation rendering this requirement as not being applicable at the time of the audit. It was reported that ready mix cement was delivered to site with concrete mixer trucks and not mixed on site.

Impacted Aspect	Condition	Finding	Observation/ Audit Evidence
	Control spills through effectively cleaning spills according to the Spill Management Plan	Not Applicable	Construction of the Ventilation Shaft 3 was completed, and the facility is in operation rendering this requirement as not being applicable at the time of the audit. The Zibulo <i>incident and non-conformance reporting procedure (AATC016640)</i> as well as the <i>Zibulo spill handling procedure (AATC003255)</i> are in place to deal with incidents at Zibulo Colliery.
<i>Operation phase</i>			
Surface Water	Stormwater runoff will be handled on surface and directed towards natural watercourses.	Non-Compliant	The previous and most recent audits revealed an issue of water from the UG operation being drawn up via the upcast vent fan system (Vent fan 3). The vent fan system draws air from the UG sections as part of the overall ventilation system. The mine has since installed a water ring which is supposed direct all this water back to the UG operation. It was however found during the audit that this installation is proving ineffective and as such the condensate water from underground is flowing into the surrounding environment. The mine has commenced with borehole drilling with the objective to return this condensate water back to groundwater. A contractor has been appointed to continue with this work.
	During operation the Ventilation Shaft should be checked for any ongoing erosion and repaired where necessary.	Compliant	Previous rill and gully erosion taking place around the Ventilation Shaft No. 3 site was found to have been improved since the last audit.
	Any runoff upstream of the Ventilation Shaft should be deflected away via berms and canals.	Compliant	Existing topographical features and site layout is such that no surface water flows towards the Ventilation Shaft site.
	Any discharge from the Ventilation Shaft must be controlled by energy dissipaters.	Non-Compliant	Condensate water from underground is flowing into the surrounding environment via the vent fan system (Vent fan 3). The discharges released from the site is not controlled by energy dissipaters, however the mine has commenced with borehole drilling with the objective to return this condensate water back to groundwater. A contractor has been appointed to continue with this work.
	During operation, the Ventilation Shaft should be checked for any ongoing erosion and repaired where necessary.	Compliant	Evidence was not observed of erosion activities occurring around the Ventilation Shaft No. 3 facility.
	Ensure that routine maintenance on all vehicles are undertaken as per maintained schedule and records are kept.	Compliant	Vehicles and plant operating at the colliery are under strict maintenance schedules and vehicle & plant workshops have been established elsewhere on the mine. Vehicles and plant maintenance is tracked through work management on a weekly basis, by the use of a job card system.
	Routine surface water quality monitoring up and down stream of clearing activities and position of infrastructure and activities associated with the proposed project will be undertaken on a monthly basis in accordance with the Water Monitoring Plan of Zibulo.	Not Applicable	A watercourse does not flow near the Ventilation Shaft No 3 site and therefore water quality monitoring cannot be conducted.
POTENTIAL DIRECT IMPACTS ON AIR QUALITY			
<i>Pre-Construction phase</i>			
Air Quality	The relevant exposed construction site areas and access gravel roads will be irrigated on a regular basis, with just enough moisture to keep the dust down without creating undue runoff.	Not Applicable	Construction of the Ventilation Shaft 3 was completed, and the facility is in operation rendering this requirement as not being applicable at the time of the audit.

Impacted Aspect	Condition	Finding	Observation/ Audit Evidence
	Construction material and debris will be kept wet with just enough moisture to keep the dust down without creating undue runoff.	Not Applicable	Construction of the Ventilation Shaft 3 was completed, and the facility is in operation rendering this requirement as not being applicable at the time of the audit.
	Where resident moisture content is not adequate to control dust and dispersion of particulates during transportation, dust raising materials will be transported in closed body vehicles and/or material will be covered with a tarpaulin.	Not Applicable	Construction of the Ventilation Shaft 3 was completed, and the facility is in operation rendering this requirement as not being applicable at the time of the audit.
	Transportation of dust raising material without covering must be restricted to an appropriate speed level (roughly 40 km/h) if dispersion of particulates and fugitive dust are observed leaving the transportation vehicles.	Not Applicable	Construction of the Ventilation Shaft 3 was completed, and the facility is in operation rendering this requirement as not being applicable at the time of the audit.
	All vehicles and equipment used during the pre-construction phase will be serviced and maintained on a regular basis.	Not Applicable	Construction of the Ventilation Shaft 3 was completed, and the facility is in operation rendering this requirement as not being applicable at the time of the audit. Vehicles and plant operating at the colliery are under strict maintenance schedules and vehicle & plant workshops have been established elsewhere on the mine.
	A dust monitoring programme must be implemented that effectively monitors dust related impacts from the project area.	Not Applicable	Construction of the Ventilation Shaft 3 was completed, and the facility is in operation rendering this requirement as not being applicable at the time of the audit.
	Control level of ambient air pollutants through regular maintenance and services of all vehicles and equipment.	Not Applicable	Construction of the Ventilation Shaft 3 was completed, and the facility is in operation rendering this requirement as not being applicable at the time of the audit.
	Control level of ambient air pollutants through regular maintenance and services of all vehicles and equipment.	Not Applicable	Construction of the Ventilation Shaft 3 was completed, and the facility is in operation rendering this requirement as not being applicable at the time of the audit. Vehicles and plant operating at the colliery are under strict maintenance schedules and vehicle & plant workshops have been established elsewhere on the mine.

Construction Phase

Air Quality	The relevant exposed construction site areas and access gravel roads will be irrigated on a regular basis, with just enough moisture to keep the dust down without creating undue runoff.	Not Applicable	Construction of the Ventilation Shaft 3 was completed, and the facility is in operation rendering this requirement as not being applicable at the time of the audit.
	Construction material and debris will be kept wet with just enough moisture to keep the dust down without creating undue runoff.	Not Applicable	Construction of the Ventilation Shaft 3 was completed, and the facility is in operation rendering this requirement as not being applicable at the time of the audit.
	Where resident moisture content is not adequate to control dust and dispersion of particulates during transportation, dust raising materials will be transported in closed body vehicles and/or material will be covered with a tarpaulin.	Not Applicable	Construction of the Ventilation Shaft 3 was completed, and the facility is in operation rendering this requirement as not being applicable at the time of the audit.

	Transportation of dust raising material without covering must be restricted to an appropriate speed level if dispersion of particulates and fugitive dust are observed leaving the transportation vehicles.	Not Applicable	Construction of the Ventilation Shaft 3 was completed, and the facility is in operation rendering this requirement as not being applicable at the time of the audit.
	All vehicles and equipment used during the pre-construction phase will be serviced and maintained on a regular basis	Not Applicable	Construction of the Ventilation Shaft 3 was completed, and the facility is in operation rendering this requirement as not being applicable at the time of the audit.
	A dust monitoring programme must be implemented that effectively monitors dust related impacts from the project area.	Not Applicable	Construction of the Ventilation Shaft 3 was completed, and the facility is in operation rendering this requirement as not being applicable at the time of the audit.

Operational Phase

Air Quality	Speed limits for maintenance vehicles should be kept at 40 km/h on access roads to the Ventilation Shaft.	Compliant	The mine has implemented a "Thungela Total Risk Standard" and also involves all mine vehicles having built-in driver behaviour monitoring systems in place. These systems monitor and record behaviours such as fast acceleration and deceleration and speed transgressions. Speed limits of roads within the mine are limited to 40 km/h.
	Vehicles and machinery should be maintained regularly to ensure that emissions are minimised.	Not Applicable	Vehicles and plant operating at the colliery are under strict maintenance schedules and vehicle & plant workshops have been established elsewhere on the mine.
	A dust monitoring programme must be implemented that effectively monitors dust related impacts from the ventilation shaft area.	Noted	Dust emissions monitoring forms part of the larger monitoring of dust fallout volumes at the mine, however dust monitoring is not undertaken specifically at the ventilation shaft area due to low activity, whilst surrounding activities (crop farming) are typical sources of dust in the area. This condition is one of the conditions a request for amendment has been applied for. The initial hard copies were submitted to the DMRE on 2 October 2020, after which the mine also re-submitted the application 18 November 2020 by request of the Department. The DMRE visited the Opencast and Underground sections of the mine in February 2022. The Department verbally made mention that it does not agree to amending these matters. Further written response from the Department is still awaited.

Potential Direct Impacts on Soil Structure and Cover Material

POTENTIAL DIRECT IMPACTS ON SOIL STRUCTURE AND COVER MATERIAL			
<i>Pre-Construction phase</i>			
Soil Structure and Cover Material	Minimise area of disturbance and clearing by limiting the footprint area to as small as practically possible.	Not Applicable	Construction of the Ventilation Shaft 3 was completed, and the facility is in operation rendering this requirement as not being applicable at the time of the audit.
	Reduce erosion and compaction through: - Stockpiling soils. - Vegetate and/or cover soil stockpiles.	Not Applicable	Construction of the Ventilation Shaft 3 was completed, and the facility is in operation rendering this requirement as not being applicable at the time of the audit.

	- Install erosion berms, if required. - Restrict vehicle movement to project related areas.		
<i>Construction phase</i>			
Soil Structure and Cover Material	Minimise area of disturbance and clearing by limiting the footprint area to as small as practically possible.	Not Applicable	Construction of the Ventilation Shaft 3 was completed, and the facility is in operation rendering this requirement as not being applicable at the time of the audit.
	Prevent accidental spills from vehicles and equipment used through regular maintenance and services of such machinery.	Not Applicable	Construction of the Ventilation Shaft 3 was completed, and the facility is in operation rendering this requirement as not being applicable at the time of the audit.
	Rip and profile soils that have been compacted as a result of the construction activities.	Not Applicable	Construction of the Ventilation Shaft 3 was completed, and the facility is in operation rendering this requirement as not being applicable at the time of the audit.
<i>Operation phase</i>			
Soil Structure and Cover Material	Control spills through effectively cleaning spills according to the Spill Management Plan.	Compliant	The Zibulo <i>Incident and non-conformance reporting procedure (AATC016640)</i> as well as the <i>Zibulo spill handling procedure (AATC003255)</i> are in place to deal with spillage related incidents at Zibulo Colliery. Apart from the condensate water issue raised as a non-compliance in previous sections of the report, actual spillages were not noted during the site inspections at the Ventilation Shaft No. 3.
POTENTIAL DIRECT IMPACTS ON CULTURAL, HERITAGE AND ARCHAEOLOGICAL RESOURCES			
<i>Construction phase</i>			
Heritage	Should any heritage artefacts be exposed during excavation, work on the area where the artefacts were discovered, shall cease immediately and the Environmental Specialists shall be notified as soon as possible;	Not Applicable	Construction of the Ventilation Shaft 3 was completed, and the facility is in operation rendering this requirement as not being applicable at the time of the audit. Mine personnel confirmed that no heritage artefacts have been uncovered during excavation work. A discussion on heritage resources is included in the mandatory induction process. Should any heritage resources be uncovered, all work is to be ceased and the mine's environmental department is to be informed, where after a specialist will be contracted to assess the find and provide the appropriate actions to be undertaken.
	All discoveries shall be reported immediately to the relevant authorities including the Mpumalanga Department of Health and SAHRA;		
	Under no circumstances shall any artefacts be removed, destroyed or interfered with by anyone on the site; and		
	Contractors and workers shall be advised of the requirements including penalties associated with the unlawful removal of cultural, historical, archaeological or paleontological artefacts, as set out in the National Heritage Resources Act (Act No. 25 of 1999), Section 51 (1).		
	Should any heritage artefacts be exposed during excavation, work on the area where the artefacts were discovered, shall cease immediately and the Environmental Specialists shall be notified as soon as possible;		
	All discoveries shall be reported immediately to the relevant authorities including the Mpumalanga Department of Health and SAHRA.		
<i>Operation Phase</i>			
	No impacts	-	No mitigation measure provided.
<i>Rehabilitation phase</i>			
	No impacts	-	No mitigation measure provided.
POTENTIAL DIRECT IMPACTS ON NOISE			
<i>Pre-Construction phase</i>			
NOISE	Control through noise control measures and limiting pre-construction activities to day	Not Applicable	Construction of the Ventilation Shaft 3 was completed, and the facility is in

	time periods.		operation rendering this requirement as not being applicable at the time of the audit. Mine personnel confirmed that construction activities are limited to daytime periods for safety and noise aspects.
<i>Construction Phase</i>			
NOISE	No impacts	-	No mitigation measure provided.
<i>Rehabilitation phase</i>			
NOISE	No impacts	-	No mitigation measure provided.
POTENTIAL DIRECT IMPACTS ON SOCIO-ECONOMIC ASPECTS			
<i>Construction phase</i>			
Socio-Economic Aspects	Enhance through adhering to Zibulo Colliery's local labour recruitment policies.	Not Applicable	Construction of the Ventilation Shaft 3 was completed, and the facility is in operation rendering this requirement as not being applicable at the time of the audit. It was however determined that Thungela Resources (and previously Anglo American) has implemented employment and recruitment policies as well as procurement policies. An open recruitment process is conducted and is based on the skills required to fill specific vacancies as well as recruitment of local labour. The organisation has a Social Hub known as Thutuka which is a business hub in Ogies where small loans are offered to communities. Other policies are contained within the SLP. In addition, the mine will continue working closely with all stakeholders, at the same time monitoring and overseeing the sustainability of community investments. The colliery will liaise with other Thungela coal operations and stakeholders to build partnership and promote sustainability and self-reliance for the community's closer to the operations. In addition, a database of local service providers has been developed and is included into Zibulo Colliery procurement policy. A 50 km radius around the mine is considered to be local.
<i>Operation Phase</i>			
Socio-Economic Aspects	No impacts	-	No mitigation measure provided.
<i>Rehabilitation phase</i>			
Socio-Economic Aspects	Enhance through adhering to Zibulo Colliery's local labour recruitment policies.	-	Construction of the Ventilation Shaft 3 was completed, and the facility is in operation. Rehabilitation phase does not apply at this stage of the Ventilation Shaft's function rendering this requirement as not being applicable at the time of the audit.
POTENTIAL DIRECT IMPACTS ON VISUAL AESTHETICS			
<i>Construction Phase</i>			
Visual Aesthetics	Control level of fugitive dust through implementing dust suppression techniques.	Not Applicable	Construction of the Ventilation Shaft 3 was completed, and the facility is in operation rendering this requirement as not being applicable at the time of the audit.
<i>Operation phase</i>			
Visual Aesthetics	Control through revegetation measurements and rehabilitation.	Non-Compliant	The embankments around the north, west and south sides of the Ventilation Shaft have not been revegetated.

<i>Decommission phase</i>			
Visual Aesthetics	No impacts.	-	No mitigation measure provided.

7.2 ENVIRONMENTAL AUTHORISATION FOR THE DEVELOPMENT OF AN ACTIVITY, INCLUDING STRUCTURES AND INFRASTRUCTURE AT ZONDAGSFONTEIN COAL MINE, OGIES, MPUMALANGA, APPROVED ON THE 8TH OF MARCH 2010, WITH REFERENCE NUMBER 17/2/2/2 NK-7

Condition number	Condition	Finding	Observation/ Audit Evidence
<i>Activities authorised</i>			
2.	Zibulo Colliery is authorised to undertake the following activity in terms of the abovementioned EA: The proposed Zondagsfontein coal mine project will consist of man and material to the underground reserves will via a vertical shaft, and coal will exit the mine by conveyor via an incline shaft located on the farm Rietvlei 64 IS. The conveyor from the incline shaft will dump coal into a 6000 ton silo to the north of the shaft. The silo will be constructed of reinforced concrete with a roof to prevent coal dust dispersion. Coal from the silo will exit onto a conveyor to a crusher (located on the farm Olga 35 IS) and then be transported via a 16 km long overland conveyor to a washing plant at the Klipspruit mine near Ogies. The area between the coal shaft and the silo and crusher will be covered with a concrete apron which will drain to the dirty water dam at the shaft. The project will consist of potable water plant, offices, stores, change house, workshop, bulk fuel storage, substation, raw water storage reservoir, sewage treatment plant, parking, a vent shaft and fans, clean-dirty water separation canals and berms and two dirty water dams on portion 5 of the farm Boschpoort 211 IR, Portion 1 and 3 of the farm Cologne 34 IS; Portion 2, 3, 4, 6, 7, 8, 11, 12, 13, 14, 15, 18, 19, 20, 21, 23, 24, 25, 26, 28, 33 and 34 of the farm Leeuwfontein 219 IR; Portion 35 of the farm Olga 35 IS; Portion 1 and 3 of the farm Onverwacht 66 IS; Remainder, Portion 1, 2, 4, 6, 7, 8, 9, 10 and 11 of the farm Rietvlei 64 IS; Portion 2, 3 and 5 Smithfield 44 IS; Portion 1, 2, 3, 5, 6, 7, 8, 9, 11, 12, 15, 16, 17, 18, 19, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 21, 32 and 33 of the farm Straffontein 252IR; Portion 2, 4, 5, 7, 11 and 14 of the farm Strehla 261 IR; Portion on the farm Uitvlugt 255 IR, Portion 7 and 8 Vlakvarkfontein 213 IR; Remainder, Portion 1, 4, 7, 9, 10, 11, 16, 17, 18, 20, 21, 22 and 198 of the farm Welgelegen 221 IR; Remainder, Portion 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 and 11 of the farm Zondagsfontein 253 IR, Ogies: Item 2 as identified in terms of Chapter 5 of the National Environmental Management Act, 1998 and Government Notice R 387 of 21 April 2006.	Noted	The mine takes note of and comprehends this condition.
<i>Commencement of the activity</i>			
3.5.	This activity must commence within a period of two (2) years from the date of issue. If commencement of the activity does not occur within that period, the authorisation lapses and a new application for environmental authorisation must be made in order for the activity to be undertaken.	Not Applicable	Mine staff previously confirmed that the underground operations commenced on 9 September 2009, however, the EA was only granted on the 8 March 2010 and the EMPr approved in terms of the MPRDA on 17 June 2010. During the past decade the infrastructure introduced, and activities undertaken have been known to the Department. It was previously recommended that this condition be removed from the authorisation via the amendment application process.
<i>Appeal of the authorisation and notifications to interested and affected parties</i>			
3.7.	The holder of the authorisation must notify every registered interested and affected party, in writing and within 10 (Ten) calendar days, of receiving notice of the Department's decision to authorize the activity.	Compliant	This condition was confirmed during past compliance audits. The following documents addressed to the Interested and Affected Parties (SRK, 2009) and dated 12 March 2010: Record of Decision (RoD) from the Mpumalanga Department of Agriculture and Land Administration regarding environmental authorisation to Anglo Inyosi Coal for the proposed listed activities associated

Condition number	Condition	Finding	Observation/ Audit Evidence
			with the Zondagsfontein Underground Coal Mine near Ogies, Mpumalanga. Proof of distribution of this letter via hard copy and electronic copy (email) was confirmed during the previous audit.
3.8.	The notification referred to in 3.7 must- 3.8.1 specify the date on which the authorisation was issued; 3.8.2 inform the interested and affected party of the appeal procedure provided for in Chapter 8 of the regulations; and 3.8.3 advise the interested and affected party that a copy of the authorisation and reasons for the decision will be furnished on request.	Compliant	The letter provided to the stakeholders was provided during the previous audit process. This letter included information relating to the date of issuance of the EA, the appeal procedure to be followed and the availability of the EA upon request.
<i>Management of the activity</i>			
3.9.	The Environmental Management Plan ("EMP"), which fulfils the requirements of this authorization, must be compiled and submitted to the Department for approval. The EMP must: • contain all the information specified in regulation 34 of the regulation; • be approved by the Department before the commencement of any construction activities and • be adhered to during the commencement, operation and closure of the activity.	Compliant	The EMP for the Zibulo Colliery UG titled Environmental Management Programme including EIA Report and I&AP Comments, Mining Right Application, Zondagsfontein Colliery, MP 30/5/1/2/2/305 MR, dated July 2008, was submitted in support of the EA application and was subsequently approved on 17 July 2010.
<i>Commissioning and operation of the activity</i>			
3.10.	Fourteen (14) days written notice must be given to the Department that the activity will commence. Commencement for the purposes of this condition includes site preparation. The notice must include a date on which it is anticipated that the activity will commence.	Compliant ??	Zibulo Colliery UG provided proof of the notification of commencement of the activity during the previous audit and proof of submission thereof to the Department.
3.11.	All construction activities must be limited to the said site. No activities must be allowed on adjacent agricultural land.	Compliant	Photographic and aerial images shared during the previous audits indicated that all construction activities took place on the said site and no construction activities were conducted on agricultural land.
3.12.	Chemical toilets must be provided to be used by construction workers. These must be serviced on a regular basis and no pit latrines are allowed.	Not Applicable	The condition was not applicable at the time of the audit.
3.13.	Potable water must be made available for the site workers.	Compliant	Potable water from the eMalahleni Water Reclamation Plant is provided to site workers. Previous site visits showed that several taps are available across site as well as at the change houses and offices.
3.14.	Proper waste management facilities must be provided as part of the construction camp. No dumping of any kind of waste (domestic, general, building rubble, etc) must take place on the adjacent agricultural land.	Not Applicable	Development of the Zondagsfontein facilities was completed, and the facility is in operation rendering this requirement as not being applicable at the time of the audit.
3.15.	Best waste management practices must be emphasized during the induction phase and on an on-going basis.	Compliant	Waste management practices are emphasised in the induction training video for employees as well as for contractors, whilst posters dealing with the same are displayed across many localities of mine. The mine has developed and implemented a procedure <i>Zibulo Waste Management Procedure</i> (Doc No. AATC 016633), approved 12 September 2017. The scope of this procedure outlines the guidelines of waste management to be followed as well included information relating to the correct separation, storage, disposal and removal of waste from the mine.
3.16.	Waste must be removed by a licensed waste disposal company and should chemical toilets be utilized, the sewage must be removed by a licensed company.	Compliant	Local waste services company 'Fotchpotch' removes domestic waste from the mine for disposal at the Phola Landfill facility, whilst TL Ideas remove hazardous waste to Holfontein, which is a licensed hazardous waste disposal facility. Hazardous waste collection and disposal manifests and waybills were available.

Condition number	Condition	Finding	Observation/ Audit Evidence
3.17.	Once the designated areas for waste skips and the planned amounts have been finalized, the mine has to obtain a section 20 applications from the DWAF in terms of the Environmental Conservation Act (Act No. 73 of 1989).	Not Applicable	Section 20 of the Environment Conservation Act 73 of 1989 ("ECA") was repealed with the commencement of the National Environmental Management: Waste Act 59 of 2008 ("NEMWA") with effect from 1 June 2009, i.e. prior to the granting of the EA on 8 March 2010.
3.18.	No activities associated with hydrocarbons and or chemicals (i.e. wash bays etc.) must be undertaken outside of an effectively designed contained area.	Not-Compliant	A large number of scrapped vehicles and underground mining plant was previously found stored across open ground with most leaking large volumes of hydrocarbon contaminants to soil and surface water in the form of engine oils, gearbox oils, hydraulic oils, greases etc. Some of these sources of contamination were cleared from the area, however the last site visit revealed that the area is not fully cleared, and hydrocarbon contamination remains a problem. The area is not managed according to the National Norms and Standards for storage of waste.
3.19.	The applicant is responsible for the removal and appropriate disposal at a landfill site of all maintenance waste produced during the operational phase.	Compliant	Waste manifests and safe disposal certificates as provided by Fotchpotch and TL Ideas examples were verified during the audit. The waste license for the Phola Landfill site used for domestic wastes was provided during the audit.
3.20.	The contractor doing civil work must ensure that construction waste must be disposed of at the relevant registered municipal waste site and for the hazardous waste at Holfontein Hazardous waste disposal site.	Not Applicable	Construction of the Zondagsfontein infrastructure was completed, and the facility is in operation rendering this requirement as not being applicable at the time of the audit.
3.21.	No servicing of vehicle must take place on site.	Compliant	A dedicated workshop is available on site for the servicing of vehicles. A workshop was included in the project description and was authorised in terms of the EA.
3.22.	The contractors must ensure that the construction vehicles are in a good condition and do not leak oil or transmission fluid onto the site.	Not Applicable	The mine has a <i>Zibulo spill handling procedure (AATC003255)</i> developed and forms part of a number of operational control procedures conformed to by the mine. It must be noted however that construction of the Zondagsfontein part of the mine was completed, and the facility is in operation rendering this requirement as not being applicable at the time of the audit.
3.23.	Soil contaminated by oil from leaking vehicles must be collected and disposed of at a hazardous waste disposal site.	Not-Compliant	As per the <i>Zibulo Waste Management Procedure (AATC016633)</i> , contaminated soils are disposed of as hazardous waste and collected in the red bins and red skips located around the site. A contractor (TL Ideas) then collects the waste for safe disposal. Although efforts have been made since the previous audit, it was again found that a number of scrapped vehicles and underground mining plant is stored across open ground with most leaking large volumes of hydrocarbon contaminants to soil which has not been cleaned-up in a long time. The area is also not managed according to the National Norms and Standards for storage of waste.
3.24.	The area to be cleared of vegetation must be limited in order to reduce the potential for dust generation especially during the windy months and erosion during the rainy season.	Compliant	Site visits indicated that minimal areas were cleared at the underground operation with the exception of the contractor laydown areas and the stone dust silo area.
3.25.	Dust suppression measures must be implemented during very dry and windy periods.	Compliant	Dust suppression by means of wetting exposed and high use surfaces is undertaken not only in dry and windy periods, but throughout the year. Water for dust suppression is abstracted from the 20 ML dam. Visible dust emissions were not noted during the duration of the site inspections.
3.26.	The excavation of soil must be done carefully and appropriate drainage systems incorporated.	Compliant	Development of the Zondagsfontein facilities was completed and trenches were incorporated during the construction phase. Furthermore, the Zibulo Colliery UG has implemented clean and dirty water trenches to isolate the clean and dirty water management systems. All dirty water trenches within the site channel contaminated surface water towards the main dirty water trench and towards the No.5 and No.6 Silt Trap before being discharged into the 7.5 MI Dam.

Condition number	Condition	Finding	Observation/ Audit Evidence
3.27.	Once the heavy machinery has cleared the bulk of these material stockpiles, the disturbed areas must be levelled and cleared of any foreign material.	Compliant	There are no material stockpiles on site. Previous site visits showed that the waste rock dump that was present on site had been removed and the area was revegetated and is showing good grass coverage.
3.28.	Noise must be well within the environmental noise limits as prescribed by Environment Conservation Act and other regulations.	Compliant	Noise assessments were undertaken by National Air Pollution Assessment Services CC during 2012. It was concluded that the impact of the surface mining area and overland conveyor belt have on the ambient noise environment varies from negligible to strong and noise levels at strategic locations were definitely above background levels. Management measures to reduce levels as recommended in the report were implemented.
3.29.	A noise survey must be conducted and approved by the Inspection Authority and Occupational Hygienist once construction of the plant is complete.	Compliant	A baseline noise assessment survey was undertaken in 2006 and an Environmental Noise Assessment undertaken in respect of the underground mining operations and conveyor during 2012.
3.30.	Other relevant approval from legislations, policies and or guidelines of any sphere of the government that are applicable must be considered before the construction of the proposed activity.	Compliant	Zibulo Colliery UG obtained a Water Use Licence (Licence No. 04/B11E/CGIJ/692) and a Mining Right in respect of the Zibulo Colliery UG.
3.31.	The Applicant must ensure that the material generated during the decommissioning phase is cleared from the site and disposed of at a registered landfill site.	Not Applicable	Zibulo Colliery UG is currently in operational phase, therefore, this condition is currently not applicable.
3.32.	Stockpiling of these soils must be done separately from the different layers of the soils, and greater care is needed with the management of erosion problems during storage.	Compliant	There are no topsoil stockpiles at Zibulo Colliery UG and the waste rock dump present during the construction phase has since been removed and the area revegetated.
3.33.	Prior to the removal of the soils for stockpiling additional sampling and analysis of the soils must be undertaken, to determine their suitability for use during rehabilitation.	Compliant	No rehabilitation activities are yet applicable to Zibulo Colliery UG as the mine is still in the operational phase. A baseline <i>Pedological Assessment for Zondagsfontein Standalone Area Western Complex</i> by GCS was completed in July 2005.
3.34.	Topsoil and subsoil must be sprayed with dust allaying agent immediately after being stockpiled.	Not Applicable	There are no topsoil or subsoil stockpiles at Zibulo Colliery UG and the rock dump that was piled during constructed has since been removed and the area revegetated.
3.35.	Stockpiles greater than 1.5m must be equipped with engineered erosion control measures.	Not Applicable	There are no topsoil or subsoil stockpiles at Zibulo Colliery UG and the rock dump that was piled during constructed has since been removed and the area revegetated.
3.36.	Rapid growth of vegetation on stockpiles must be promoted by means of watering.	Compliant	There are no topsoil, subsoil or rock stockpiles at Zibulo Colliery UG and the rock dump that was piled during constructed has since been removed and the area revegetated. This was confirmed with site photographs and aerial images.
3.37.	The mine must ensure that all erosion controls measures are included in the designs of all linear infrastructures (railway lines, power lines, conveyors, pipelines etc,) and points of water discharge.	Compliant	Discussions and previous site visits indicate that a network of clean water channels has been implemented around the security offices, car park, change house and mine offices to direct clean surface water runoff away from the dirty water management system and towards the wetland and watercourse to the south of the Zibulo Colliery UG.
3.38.	Areas where erosion control measures have been implemented must be inspected on a weekly basis to determine their effectiveness.	Compliant	The colliery is inspected on a weekly basis by either the Environmental Officer, employees of Zibulo Colliery UG, and/or the Environmental Superintendent as well as by contractors. Furthermore, the erosion control measures implemented at the overland conveyor for wetland crossings are inspected on a regular basis throughout the day by an external contractor and on a regular basis by a civil engineer of the Zibulo Colliery UG. Where any concerns are identified, such are reported and raised on Enablon for investigation, actioning and close-out. The colliery also holds 'GM SHE Day' days on monthly basis, and these attendees are Section Heads, General Managers, Heads of Departments and the Environmental Superintendent.

Condition number	Condition	Finding	Observation/ Audit Evidence
3.39.	There must be an incident management system including procedures and training for dealing with incidents.	Compliant	The <i>Zibulo incident and non-conformance reporting procedure (AATC016640)</i> and the <i>Zibulo spill handling procedure (AATC003255)</i> are in place to deal with incidents at Zibulo Colliery UG. Further, all employees and contractors receive training on these procedures as well as undertake mandatory induction, which provides information on the manner in which incidents are reported and handled. Non-compliances are also reported on the Enablon system and responsible persons assigned to address incidents. Incidents are raised on Job Cards – on the Work Management System from where relevant responsible roles are assigned and action items towards addressing issues and addressed and close-out.
3.40.	Major spillage incidents must be reported to the DME, DWAF, MDALA and the National Department of Agriculture (NDA).	Compliant	The <i>Zibulo emergency preparedness procedure (ATC003259)</i> identifies potential emergency situations and potential accidents that can have an impact on the environment and how the mine will respond to such situations. This procedure also defines the roles and responsibilities required to handle the emergency response in a manner, which will minimise the impact on the environment. The procedure also stipulates further actions that may be required, such as the notification of the Department of Water and Sanitation, the Department of Mineral Resources, the police and emergency services. Environmental incidents at Zibulo Colliery are reported according to the <i>Environmental Incident and Non Conformance Reporting Procedure</i> .
3.41.	If spills do occur and soils become contaminated, appropriate remedial measures must be identified in consultation with appropriate qualified specialists.	Not-Compliant	Zibulo Colliery UG has a spill management procedure in place and implements corrective actions as per the incident management procedure. It was however found that the long-standing issue of scrapped vehicles and underground mining plant being stored across open ground with most leaking large volumes of hydrocarbon contaminants to soil, still remains.
3.42.	Contractor Lay Down Area needs to be established within designated mining areas, or where the footprint of the area will become part of the mining infrastructure.	Compliant	As verified during previous site visits conducted, the contractors' lay down areas have been established within the designated mining areas.
3.43.	Should any rare or endangered species be found within the Expansion Project area must be relocated under the guidance of relevant authorities.	Not Applicable	Zibulo Colliery UG did not have an expansion project at the time of issuance of this EA, as well as during the audit period, therefore, this condition was reported as not applicable.
3.44.	Dust must be suppressed by using the same dust suppression method as for topsoil stockpiles.	Compliant	There are no topsoil, subsoil or rock stockpiles at Zibulo Colliery UG and the rock dump that was piled during constructed has since been removed and the area revegetated. This was confirmed during previous site visits. Dust is suppressed on site through a bowser using water from the 7.5 ML dam as well as a dust binding agent.
3.45.	Ongoing ambient and PM10 monitoring must be implemented with dust monitors concentrated of the west of the site.	Non-Compliant	This condition is one of the conditions a request for amendment has been applied for. The initial hard copies were submitted to the DMRE on 2 October 2020, after which the mine also re-submitted the application 18 November 2020 by request of the Department. Response from the Department is still awaited. The DMRE visited the Opencast and Underground sections of the mine in February 2022. The Department verbally made mention that it does not agree to amending these matters. Further written response from the Department is still awaited. No monitoring for dust fallout and PM10 is conducted at the Zibulo Colliery UG operation. Mine personnel described that as part of the new emergency stockpile project (Part 2 EMPr amendment submitted to DMR for approval), dust fallout monitoring will be implemented. Zibulo Colliery UG has since the previous audit appointed external specialists Eco Elemental to assist with air quality monitoring matters. The mine has

Condition number	Condition	Finding	Observation/ Audit Evidence
			therefore taken reasonable measures to resolve this non-compliance.
3.46.	All employees must be made aware of all environmental issues during induction and must continuously be updated of all new issues.	Compliant	The induction provided to employees and contractors includes environmental issues that are regularly updated.
3.47.	Clean and dirty water systems must be implemented prior to the commencement of construction activities.	Non-Compliant	Zibulo Colliery UG has implemented clean and dirty water trenches to isolate the clean and dirty water management systems. All dirty water trenches within the site are supposed to direct contaminated surface water towards the main dirty water trench and towards the No.5 and No.6 Silt Trap before being discharged into the 7.5 ML Dam. It was however found that some activities on site are contaminating the canal network which shows signs of occasional overflow and potentially into the wetland to the south of the site.
3.48.	All pollution control dams and other dirty water infrastructure must be lined with a HDPE liner.	Compliant	Previous site visits confirmed that PCDs are lined. This is also confirmed in the Polluted Water Dam Inspection Reports compiled by Semane.
3.49.	All pollution control dams must be maintained regularly to maintain their effectiveness.	Compliant	Visual observations during previous site visits and dam safety inspections reports by Semane confirmed that the dams are well maintained.
3.50.	Spillage clean up kits must be made available at each area where hydrocarbons are being utilized.	Not-Compliant	Previous site visits indicated that spill kits are available where hydrocarbon spills are most likely to occur and all spills at the Zibulo Colliery UG are supposed to be managed in terms of the <i>Zibulo Spill Handling Procedure (AATC003255)</i> . A large number of scrapped vehicles and underground mining plant continues to be found stored across open ground with most leaking large volumes of hydrocarbon contaminants to soil and surface water in the form of engine oils, gearbox oils, hydraulic oils, greases etc. This area did not have spill kits. Spillages and leaks have not been cleaned-up in the area.
3.51.	During an induction and ongoing all employees must be trained on how to rehabilitate contaminated spill areas.	Compliant	All new employees are trained on spill handling during inductions. All employees and contractors to Zibulo Colliery are also required to undertake mandatory induction. Induction applies to all new employees to the mine, visitors and to all employees that have been away from the site for two weeks duration or longer. Every 18 months an individual would have at least been re-inducted.
3.52.	The construction of borrow pits, stockpiles and pollution control dams must be within the mining rights area and be within designated areas.	Not Applicable	There are no borrow pits on-site and the rock dump had since been removed from the area and the area revegetated. Construction had been completed over a decade ago.
3.53.	Around the operational area, dirty water and clean water systems must be implemented to mitigate and reduce impact on groundwater.	Non-Compliant	Zibulo Colliery UG has implemented clean and dirty water trenches to isolate the clean and dirty water management systems. All dirty water trenches within the site are supposed to direct contaminated surface water towards the main dirty water trench and towards the No.5 and No.6 Silt Trap before being discharged into the 7.5 ML Dam. It was however found that some activities on site are contaminating the canal network which shows signs of occasional overflow and potentially into the wetland to the south of the site.
3.54.	All vehicles must use the limited speed of 40km per hour, especially during the high-risk periods of high winds; high temperature and low humidity must be enforced.	Compliant	A maximum speed limit of 40km/h is enforced as an Anglo Safety Standard.
3.55.	There must be a consultation and cooperation with local law enforcement agencies to ensure legal and regulatory compliance on the road.	Compliant	Consultation and cooperation with local enforcement is continuously undertaken at Zibulo Colliery UG. Mine personnel further confirmed that Zibulo UG has established an annual road safety campaign in collaboration with the roads department (although the last campaign was held in 2019 due to the Covid-19 pandemic).
3.56.	Gravel roads, topsoils and subsoils must be sprayed with a dust allaying agent.	Compliant	There are no topsoil or subsoil stockpiles at Zibulo Colliery UG, however, dust suppression is undertaken on the gravel access roads that are present at the incline shaft area. Dust-a-Side, a dust allaying agent, along with water from the

Condition number	Condition	Finding	Observation/ Audit Evidence
			7.5 MI Dam are used for dust suppression.
3.57.	Graveyards must be preserved <i>in situ</i> , they must be demarcated with brick walls or with fences and the mine must remain responsible for their future unaffected existence.	Compliant	Zibulo Colliery UG has undertaken a Heritage Impact Assessment as part of the mining right application process (Oryx Environmental, 2001). A fenced graveyard is present at the old farmhouse also fenced and used for mine meetings. However, no further graveyards are located within the mines surface area.
3.58.	A forensic archaeologist or reputed undertaker who is acquainted with the administrative procedures and relevant legislation must be involved whenever human remains are exhumed and relocated.	Noted	This condition is noted and comprehended by the mine personnel.
3.59.	If there are any land claims submitted to the Department of Land Affairs, in terms of the Restitution Act, commencement of the mine activities must be delayed until the claim is resolved or finalized, and proper procedures and processes of the legislation must be followed about the claim.	Noted	The Zibulo Colliery UG takes note of the requirements of this condition and is not aware of any land claims for the properties on which the mine is located.
3.60.	Surrounding property owners must be informed of the blasting procedures and schedules and blasting times must be planned in advance and must be clearly indicated on the mining area.	Compliant	Zibulo Colliery UG clarified that there are no landowners nearby to be informed of blasting procedures and schedules as required as per the condition. In addition, blasting underground only takes place when dykes are intercepted. Zibulo Colliery UG has compiled an <i>Explosives Charging and Blasting Procedure</i> which it needs to comply to (ZIB/MIN/UG/SWP/0030).
3.61.	Employees and outside contractors must be informed of the blasting procedures and the associated safety measures to be taken during their induction.	Compliant	Employees and contractors are made aware of the blasting procedures and safety measures during induction. The mine also has a procedure on blasting (ZIB-MIN-UG-SWP-0030 - <i>Explosives Charging and Blasting</i>).
3.62.	During construction and operation, haulage roads must be treated with Dust-aside or a similar product to reduce water usage and dust creation.	Compliant ?	There are no haul roads at Zibulo Colliery UG, therefore, this condition is not applicable. It is however important to note that dust suppression with Dust-a-Side additive utilised is undertaken on all gravel access roads at Zibulo Colliery UG.
3.64.	Construction workers must be easily identified as part of the construction team by wearing the specific clothing and/or name tags.	Not Applicable	This condition is not applicable during the time of the audit as construction activities were finalised in 2009.
3.65.	Pro-active measures must be put in place by the Emalahleni Local Municipality and DCM to minimize negative impacts associated with the influx of construction workers and potential job seekers to the area.	Noted	This condition is noted and comprehended by the mine personnel.
3.66.	The Applicant must pro-actively inform the local municipality and local residents of roads closure and diversions.	Not Applicable	This condition is not applicable to the underground operations at Zibulo Colliery UG.
3.67.	The Expansion Project must link with the Integrated Development Plan (IDP) of the Emalahleni Local Municipality especially with regards to the planning processes to ensure adequate water supply and other programmes.	Not Applicable	Zibulo Colliery UG did not have an expansion project at the time of issuance of this EA, therefore, this condition is reported as not applicable.
3.68.	Local SMME must be allowed the opportunity to become involved in maintenance, security services, garden services, cleaning and catering services and transport services.	Compliant	According to Zibulo Colliery Social and Labour Plan ("SLP"): Social and Labour Plan Progress Report, Zibulo Colliery, 2014, BEE companies are given preferred supplier status and during 2014, its business units spent R27 billion with black-empowered companies, excluding goods and services procured from government institutions (municipalities), state owned or parastatal companies (Eskom, Transnet etc). In 2014 Thermal Coal (including AAIC) alone spent a total of R7.8 billion with B-BBEE companies, attaining a B-BBEE spend of 68%. This represents a 12% rise against the previous year's percentage of 56%. Thermal Coal & Inyosi Coal shall through its Supply Chain continue to increase partnership with B-BBEE companies/suppliers beyond legislative compliance. Zibulo Colliery further sets targets for operation in respect of purchases from Local BEE companies. These are BEE companies based within the 50km radius of the operation. During 2014, Zibulo Colliery's targeted expenditure with Local BEE enterprises was R164 million (18% of total Discretionary Spend). It is

Condition number	Condition	Finding	Observation/ Audit Evidence
			pleased to have achieved an actual of R295 million (32% of total Discretionary Spend) from a total of 82 local black empowered companies. Zibulo colliery increased its local spend by 1%. It was noted that TL Ideas, Fotchpotch, and the gardening services are all lately sourced local service providers.
3.69.	A skills development programme must be embarked upon before the mine is fully operation to ensure that locals are "employed".	Compliant	A SLP was compiled for the envisaged life of mine at Zibulo Colliery UG. The SLP outlines the mine's plans and objectives in terms of Human Resource Development, Local Economic Development and the management of downscaling and retrenchments.
3.70.	Take care to implement the aspects indicated in the EMP, with specific focus on water (surface and ground) and dust management.	Noted	This condition is noted and comprehended by mine employees.
3.71.	Access roads and entrances to the mining area must be carefully planned to limit any intrusions, noise and dust pollution, as well as to limit any risks of accidents.	Compliant	The access road to Zibulo Colliery UG is tarred and accordingly does not result in dust emissions. No new roads have been established.
3.72.	Ensure access points comply with approved standards and are well marked and indicated.	Compliant	Slip lanes were implemented to allow for the free movement of traffic as vehicles turn off to the mine as well as to prevent accidents. Traffic signs were also implemented to limit the risk of accidents. Relevant signages are on display along the R545 provincial road and height restriction signages are in place where the power lines cross the road.
3.73.	Construction vehicles and those transporting materials and goods must be inspected to ensure that these are in good working conditions and not overloaded not to spill any coal or product on the road.	Not Applicable	All coal is transported to the Phola Processing Plant via the overland conveyor and onto train trucks on an existing rail system system and not trucks.
3.74.	An Environmental Committee must be established and used as a forum to keep interested and affected parties informed of the significant environmental aspects identified through the Environmental Impact Report and Environmental Management Plans.	Compliant	Although not known as a formal environmental committee, Zibulo Colliery UG has implemented a consultation process known as the "Farmer's Day meetings" during which the farmers are informed of the mining activities being conducted as well as providing the opportunity for the attendees to raise any concerns. Photographic evidence of such forums was shared with the auditor during previous audits and it has become an annual institution. The last "Farmer's Day" was held was in 2019 due to the restrictions and risks of the Covid-19 pandemic.
<i>General</i>			
3.75.	A copy of this authorization must be kept at the property where the activity will be undertaken. The authorization must be produced to any authorized official of the Department who requests to see it and must be made available for inspection by any employee or agent of the holder of the authorization who works or undertakes work at the property.	Compliant	A copy of the Environmental Authorisation is kept with the Environmental Superintendent of the Environmental Department.
3.76.	Where any of the applicant's contact details change, including the name of the responsible person, the physical or postal address and/or telephonic details, the applicant must notify the Department as soon as the applicant knows the new details.	Compliant	The mine communicated via a letter to the DWS on 7 June 2021 regarding the demerger from Anglo Operations (Pty) Ltd as well as company address changes because of it. The DWS acknowledged the same in a letter dated 23 June 2021 (Ref no: 04/B11E/CI/3886).
3.78.	The holder of the authorization must notify the Department, in writing and within 24 (twenty four) hours, if conditions of this authorization are not adhered to. Any notification in terms of this condition must be accompanied by reasons for the non-compliance.	Not Compliant	This condition forms part of the amendment application Zibulo Colliery UG is busy with, in other words, Zibulo Colliery has taken reasonable measures to rectify the non-compliance The mine has not informed the MDARDLEA of any non-compliances with the conditions to the EA, however annual external compliance audit reports are submitted to the Department and shared in the public domain. The DMRE visited the Opencast and Underground sections of the mine in February 2022. The Department verbally made mention that it does not agree to amending these matters. Further written response from the Department is still awaited.
3.79.	Non-compliance with a condition of this authorization may result in criminal prosecution	Noted	This condition is noted and comprehended by the mine employees.

Condition number	Condition	Finding	Observation/ Audit Evidence
	or other actions provided for in the National Environmental Management Act, 1998 and the regulations.		

8. DELIBERATIONS

8.1 ADEQUACY AND COMPLIANCE WITH THE ZIBULO COLLIERY UG'S (ZONDAGSFONTEIN) EMPR

8.1.1 Adequacy of the Zibulo Colliery UG's EMPR

Inadequacies in terms of the EMPR document itself were not noted at the time of the audit. From previous site visits activities were not identified that are undertaken by the mine that do not form part of the approved EMPR.

8.1.2 Compliance with the Zibulo Colliery UG's EMPR

There were no non-compliances raised during the audit:

8.2 ADEQUACY AND COMPLIANCE WITH THE ZIBULO COLLIERY UG'S VENTILATION SHAFT NO. 3 COMPLEX EMPR

8.2.1 Adequacy of the Zibulo Colliery UG's Ventilation Shaft No. 3 EMPR

Inadequacies in terms of the EMPR document itself were not noted at the time of the audit.

8.2.2 Compliance with the Zibulo Colliery UG's Ventilation Shaft No. 3 EMPR

The following non-compliances were identified during the audit:

- The previous audit revealed an issue of water from the UG operation being drawn up via the upcast vent fan system (Vent fan 3). The vent fan system draws air from the UG sections as part of the overall ventilation system. The mine has since installed a water ring which is supposed direct all this water back to the UG operation. It was however found during the audit that this installation is proving ineffective and as such the condensate water from underground is flowing into the surrounding environment.
- Condensate water from underground is flowing into the surrounding environment via the vent fan system (Vent fan 3). The discharges released from the site is not controlled by energy dissipaters, however the mine has commenced with borehole drilling with the objective to return this condensate water back to groundwater. A contractor has been appointed to continue with this work.
- The embankments around the north, west and south sides of the Ventilation Shaft have not been revegetated.
- It was noted that a stone dust silo had recently been erected adjacent to the Ventilation Shaft No.3 facility – an activity and associated environmental impacts that did not form part of the Basic Assessment Process at the time and not accounted for in the EMPR.

8.3 COMPLIANCE WITH THE ENVIRONMENTAL AUTHORIZATION

8.3.1 Environmental Authorisation for the development of an activity, including structures and infrastructure at Zondagsfontein Coal Mine

The following non-compliances were identified during the audit:

- A large number of scrapped vehicles and underground mining plant was previously found stored across open ground with most leaking large volumes of hydrocarbon contaminants to soil and surface water in the form of engine oils, gearbox oils, hydraulic oils, greases etc. Some of these sources of contamination were cleared from the area, however the last site visit revealed that the area is not fully cleared, and a significant amount of hydrocarbon contamination remains. The area is not managed according to the National Norms and Standards for storage of waste. Continued hydrocarbon spillage may potentially result in the breach of the provisions contained in Part 8 of the National Waste Management Act, 2008 pertaining to contamination of land. Thus, it is important for the mine to resolve these issues timeously.
- Ongoing ambient and PM10 monitoring is required to be implemented with dust monitors concentrated of the west of the site. This condition forms part of the latest amendment application to the Department. No monitoring for dust fallout and PM10 is conducted at the Zibulo Colliery UG operation. Mine personnel described that as part of the new emergency stockpile project (Part 2 EMPr amendment submitted to DMRE for approval), dust fallout monitoring will be implemented.
- Zibulo Colliery UG has implemented clean and dirty water trenches to isolate the clean and dirty water management systems. All dirty water trenches within the site are supposed to direct contaminated surface water towards the main dirty water trench and towards the No.5 and No.6 Silt Trap before being discharged into the 7.5 ML Dam. It was however found that some activities on site are contaminating the canal network leading directly to the wetland in the south of the site.
- Previous site visits indicated that spill kits are available where hydrocarbon spills are most likely to occur and all spills at the Zibulo Colliery UG are supposed to be managed in terms of the Zibulo Spill Handling Procedure (AATC003255). A large number of scrapped vehicles and underground mining plant continues to be found stored across open ground with most leaking large volumes of hydrocarbon contaminants to soil and surface water in the form of engine oils, gearbox oils, hydraulic oils, greases etc. This area did not have spill kits. Spillages and leaks have not been cleaned-up in the area.
- It is required that Zibulo notify the Department, in writing and within 24 hours, if conditions of the EA are not adhered to. Any notification in terms of this condition must be accompanied by reasons for the non-compliance. This condition forms part of the latest amendment application Zibulo Colliery UG is busy with. The mine has not informed the MDARDLEA of any non-compliances with the conditions to the EA, however annual external compliance audit reports are submitted to the Department and shared in the public domain.

9. CONCLUSION

This environmental audit report was compiled to comply with the relevant legislative requirements specifically the NEMA, with the main objectives to report on the compliance status of the commitments and conditions, as well as the appropriateness and adequacy of the various EMPr. This audit report will be submitted to the competent authority. Within 7 days of submission of this Audit Report to the competent authority (DMRE), Zibulo Coal Mining (Pty) Ltd, Zibulo Colliery UG, must notify all potential and registered I&APs of the submission, and make this report immediately available to anyone on request and on a publicly accessible website.

10. DISCLAIMER

This report has been produced by Geovicon Environmental (Pty) Limited, with the skill and care normally exercised by a reasonable Environmental Consultant during the rendering of the service. The service provided by Geovicon Environmental (Pty) Limited should not be considered as legal opinion of any kind but shall be a representation of the findings. The work performed was based on the Client's scope of work, time and resources allocations as well as information provided by the Client. Any reference to legislation in this report should not be considered as a substitute for the provisions of such legislation.

Geovicon Environmental (Pty) Limited ensured by all means that information provided by management and/or representative is correct and relevant thus this report is based on information that could have reasonably been sourced within the time period allocated to the audit performed. It should not be assumed that all possible and applicable findings are included in this report as this report represents a sample of the audit. Therefore, should additional information become available, Geovicon Environmental (Pty) Limited reserves the right to amend its findings accordingly.

Signed:  _____

Date: 16/11/2022

J.R. Nawn

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