



ZIBULO NORTH SHAFT PROJECT

Environmental External Audit Report 2022/ 2023

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

DMRE Reference Number: (MP) 30/5/1/2/3/2/1/(305) EM

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Table of Contents

1. INTRODUCTION.....	1
1.1. BACKGROUND	1
1.2. TERMS OF REFERENCE.....	4
1.3. ASSUMPTIONS AND LIMITATIONS	5
2. AUDITORS.....	5
3. AUDIT METHODOLOGY.....	8
3.1. INFORMATION COLLATION AND REVIEW.....	8
3.2. SITE VERIFICATION	9
3.3. ASSESSMENT METHODOLOGY	9
4. AUDIT FINDINGS	10
4.1. ZIBULO NORTH SHAFT PROJECT INTEGRATED ENVIRONMENTAL AUTHORIZATION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT 107 OF 1998) AS AMENDED READ WITH THE ENVIRONMENTAL IMPACT ASSESSMENT (EIA) REGULATIONS, 2014 AS AMENDED REGARDING AN AMENDMENT APPLICATION IN RESPECT OF THE FARM STRATHFONTEIN 252 IR, FARM SMITHFIELD 44 IS, FARM LEEUFONTEIN 219 IR, AND STRAFFONTEIN 252 IR, WITHIN THE MAGISTERIAL DISTRICT OF WITBANK: MPUMALANGA REGION; DATED 29 MARCH 2023 WITH DMRE REFERENCE NO. (MP) 30/5/1/2/3/2/1/(305) EM. 11	
4.2. THUNGELA ZIBULO NORTH SHAFT PROPRIETY LIMITED FINAL ENVIRONMENTAL IMPACT REPORT (EIR) AND ENVIRONMENTAL MANAGEMENT PROGRAMME (EMPr) FOR ZIBULO NORTH SHAFT PROJECT; DATED JUNE 2022 WITH DMRE REFERENCE NO. MP 30/5/1/2/2/305 MR.....	22
5. DELIBERATIONS	76
5.1. ZIBULO NORTH SHAFT PROJECT IEA	76
5.1.1 Effectiveness of the IEA.....	76
5.1.2 Recommendations for IEA amendment	76
5.2. ZIBULO NORTH SHAFT PROJECT EMPr	76
5.2.1 Effectiveness of the IEA.....	76
5.2.2 Recommendations for IEA amendment	76
6. CONCLUSION	76
APPENDIX A: AUDIT TEAM ATTENDANCE REGISTER	78
APPENDIX B: PHOTOGRAPHIC EVIDENCE.....	80

List of Figures

FIGURE 1: ZIBULO COLLIERY MINING RIGHT AREA (ANGLO AMERICAN, ND).....	2
FIGURE 2: ZIBULO NORTH SHAFT PROJECT INFRASTRUCTURE BLOCKPLAN (ZUTARI, 2022).....	3

List of Table

TABLE 1: AUDIT TEAM CONTACT DETAILS.....	5
TABLE 2: ASSESSMENT CRITERIA.....	10

ACRONYMS

Anglo	Anglo American Inyosi Coal
DFO	Dust Fallout
DMRE	Department of Mineral Resources and Energy
DWS	Department of Water and Sanitation
EA	Environmental Authorisation
EAP	Environmental Assessment Practitioner
ECO	Environmental Control Officer
ECSA	Engineering Council of South Africa
EIA	Environmental Impact Assessment
EMPr	Environmental Management Programme Report
EMS	Environmental Management System
HDSA	Historically Disadvantaged South Africans
I&AP	Interested & Affected Party
IEA	Integrated Environmental Authorization
IWULA	Integrated Water Use License Application
LoM	Life of Mine
NAAQS	National Ambient Air Quality Standards
NEMA	National Environmental Management Act
NEM:AQA	National Environmental Management: Air Quality Act
NWA	National Water Act 36 of 1998
PCD	Pollution Control Dam
PPE	Personnel Protective Equipment
SABS	South African Bureau of Standards
SLP	Social Labour Plan
SMME	Small, Micro, Medium Enterprises
WUL	Water Use License

1. Introduction

1.1. Background

Thungela Operations (Pty) Limited (Thungela) owns interest in several thermal coal mines in South Africa and export mainly to the Indian, Asian, SEA, Middle East and North African markets. The Zibulo Colliery (Zibulo) operates both underground and opencast operations located in Mpumalanga Province, located approximately 100km east of Johannesburg and approximately 60km southwest of eMalahleni, (refer to Figure 1).

The underground mine was established in 2009 in the south eastern part of the eastern coal reserve and consists of eight bord and pillar Continuous Miner ("CM") mining sections and one CM development section. The mining as per the current Life of Mine (LoM) plan is progressing to the north of the coal reserve. It was determined that the identified coal reserve beyond the current life of mine area occurs in quantities sufficient for a viable extension to the current Life of Mine. The Zibulo North Shaft Project (Zibulo North) entails mining of the No. 2 coal seam underground reserve by conventional bord and pillar underground mining method project will comprise of the following activities: A man and materials decline shaft and associated infrastructure; an overland conveyor belt; a buried potable water pipeline; temporary contaminated material stockpile; pollution Control Dam (PCD) and truck load out station (refer to Figure 2).

As part of the environmental legal requirements stated 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 as amended) the following components of Zibulo North Shaft to commence are authorised as follows:

- Integrated Environmental Authorization in terms of the National Environmental Management Act, 1998 (Act 107 of 1998) as amended read with the Environmental Impact Assessment (EIA) Regulations, 2014 as amended regarding an amendment application in respect of the Farm Strathfontein 252 IR, Farm Smithfield 44 IS, Farm Leeufontein 219 IR, and Straffontein 252 IR, within the Magisterial District of Witbank: Mpumalanga Region; dated 29 March 2023 with DMRE Reference no. (MP) 30/5/1/2/3/2/1/(305) EM.
- Thungela Zibulo NorthPropriety Limited (A member of Thungela Resources Limited) Final Environmental Impact Report (EIR) and Environmental Management Programme (EMPr) for Zibulo North Shaft Project; dated June 2022 with DMRE Reference no. MP 30/5/1/2/2/305 MR.

NTC Group (Pty) Ltd (NTC) was appointed by Thungela as the independent Environmental Assessment Practitioner (EAP) to undertake the 2023 annual environmental authorisation (EA) and environmental management programme (EMPr) Compliance Assessment and this report presents the methodologies and findings thereof.

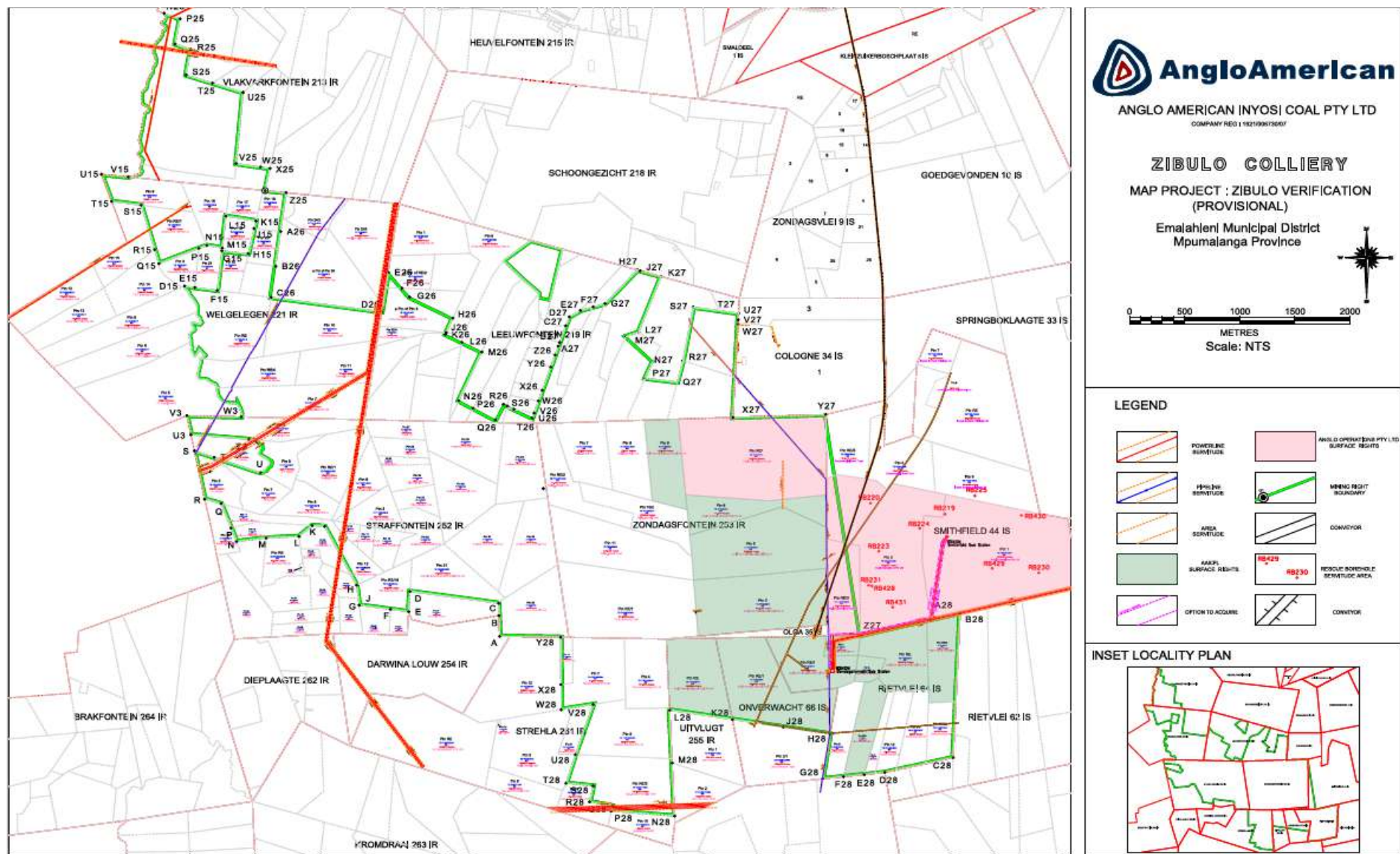


Figure 1: Zibulo Colliery Mining Right Area (Anglo American, nd)

1.2. Terms of Reference

Section 24N(7)(d) of NEMA requires that the holder and any person issued with an environmental authorisation (EA) must monitor and audit compliance with the requirements of the EMPr or environmental management plan. Furthermore, Regulation 34 of the NEMA EIA Government Notice Regulation (GNR) 982 effected 2014 (as amended) states amongst others, that the holder of an EA must, for the period during which the EA, EMPr and the closure plan, in the case of a closure activity remain valid must: a) ensure that the compliance with the conditions of the Environmental Authorisation, the EMPr, and the closure plan is audited; and b) submit the environmental audit report to the relevant Competent Authority. Additionally, the audit findings must be verifiable, in a structured and systematic manner on the level of performance against and compliance of the organisation's EA, it further states that the recommendations to amend the EMPr for rectification of the shortcomings must be subjected to Public Participation for approval by the Competent Authority.

As a result of the above, the Environmental Authorisation and Environmental Management Plan is required to undergo regular auditing in accordance with NEMA EIA Regulations as stated and Appendix 7 as amended in the current EIA Regulation. The frequency is stipulated in the EA, specifically annually. Following from the above, compliance assessments on the approved Environmental Management Programmes for Zibulo North were assessed and include:

- Integrated Environmental Authorization in terms of the National Environmental Management Act, 1998 (Act 107 of 1998) as amended read with the Environmental Impact Assessment (EIA) Regulations, 2014 as amended regarding an amendment application in respect of the Farm Strathfontein 252 IR, Farm Smithfield 44 IS, Farm Leeufontein 219 IR, and Straffontein 252 IR, within the Magisterial District of Witbank: Mpumalanga Region; dated 29 March 2023 with DMRE Reference no. (MP) 30/5/1/2/3/2/1/(305) EM.
- Thungela Zibulo North Propriety Limited (A member of Thungela Resources Limited) Final Environmental Impact Report (EIR) and Environmental Management Programme (EMPr) for Zibulo North Shaft Project; dated June 2022 with DMRE Reference no. MP 30/5/1/2/2/305 MR.

The compliance assessments on the approved IEA and EMPr as stated above for Zibulo North Shaft Project were assessed, and findings are detailed in Section 4.

1.3. Assumptions and limitations

The scope of the compliance assessment was to assess the environmental management practices being implemented during operation of the Zibulo North Shaft Project, in accordance with the approved environmental authorisation and other authorisations/license/permits issued.

The objective of the audit included the review of documents, reports etc stated under Section 3 and interview persons, to determine if the operation phase of Zibulo North Shaft Project is compliant with approved EA and other permits.

The following assumptions and/or limitations are applicable to the audit process and resulting findings:

- The EA was issued in March 2023. Thus, the audit period can only commence from this date, until such time as the audit (specifically the site visit) is specifically conducted, in November 2023. This Audit is therefore a snapshot representation of the Zibulo North Shaft Project and the audit period assessed includes **March 2023 to November 2023** only.
 - It should be noted that construction at Zibulo North Shaft Project commenced on 05 May 2023 and going forward the audit period will be aligned with the Zibulo Colliery Underground Mining audit period.
- The Zibulo North Shaft Project is in construction phase only and all the other authorised activities that were not currently occurring on site (e.g. operational and commissioning) were deemed "Not Applicable".
- Due to access issues, not all areas were visited during the site assessment. Instead, specific areas representative of the construction activities were visited to provide a demonstration of site operations.
- Procedures developed by Thungela are deemed to be appropriately implemented as part of the Integrated Management System by site personnel; and
- Outdated/repealed legislation or referenced guideline documents in the EA and EMPr will be substituted for current/relevant legislation and referenced guideline documents.

2. Auditors

NTC was established in 2005. It is 100% female black owned with a Level 1 Broad Based Black Economic Empowerment (BBBEE) Rating. We undertake our services with professional integrity and have built good reputations with stakeholders in the environmental management field including regulatory authorities and government departments. We undertake all our services within the requirements of applicable South African legislation, as well as acceptable international best practices, norms and standards. The details of the specific environmental consultants who completed and/or assisted with the Compliance Assessment are provided in

Table 1.

Table 1: Audit Team Contact Details

Role	Responsible Person	
Quality Control		Tel: +27 11 462 2022

	Tebogo Mapinga (Pr. Sci. Nat) is an Environmental Auditor (Peer Reviewer) at NTC Group (Pty) Ltd. She has over 16 years' experience in the Environmental Management field including extensive experience within the mining sector. Tebogo provided quality assurance during the audit preparations and report compilations.	Fax: +27 86 665 1864
		Email: admin@ntcgroup.co.za
Auditor	Raisibe Mabiza (Pr.Sci.Nat) is an Environmental Scientist contracted to NTC Group (Pty) Ltd. She has over 8 years' experience in the Environmental field inclusive of experience in the mining sector. Raisibe was involved in the audit preparation, site assessment, audit report compilation and document review of the supporting audit documents.	Tel: +27 11 4622 022
		Fax: +27 86 665 1864
		Email: raisibe@ntcgroup.co.za
Auditor	Ethel Chifunda (MSc) is a Principal Consultant at NTC Group (Pty) Ltd. She has over 5 years' experience in the Environmental Management field including extensive experience within the mining sector. Ethel was the Auditor who undertook the audit preparations, site assessment and review of the audit report.	Tel: +27 11 4622 022
		Fax: +27 86 665 1864
		Email: ethel@ntcgroup.co.za

2.1 Declaration Of Independence

The Environmental Assessment Practitioner General declaration:

I, Raisibe Mabiza, declare that –

- I act as the independent environmental practitioner in this Audit;
- I will perform the work relating to the audit in an objective manner, even if this results in views and findings that are not favourable to the auditee;

I declare that there are no circumstances that may compromise my objectivity in performing such work;

- I have expertise in conducting environmental compliance audits, including knowledge of the Act, regulations and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, Regulations and all other applicable legislation;
- I have not and will not engage in, conflicting interests in the undertaking of the activity;
- I will provide the competent authority with access to all information at my disposal regarding the audit, whether such information is favourable to the auditee or not; will perform all other obligations as expected from an environmental assessment practitioner in terms of the Regulations; and
- I realise that a false declaration is an offence in terms of regulation 48 and is punishable in terms of section 24F of the Act.

Disclosure of Vested Interest:

I do not have and will not have any vested interest (either business, financial, personal or other) in the activity other than remuneration for work performed in terms of the Environmental Impact Assessment Regulations, 2014.

Signature: 

Company: NTC Group (Pty) Ltd

Date: November 2023

3. Audit Methodology

3.1. Information Collation and Review

NTC reviewed the IEA and the EMP_r, and compiled a checklist that contained the conditions that required compliance assessment. The audit evidence will be made available to the respective authorities by Thungela upon request. The information verified during the audit includes inter alia:

- Integrated Environmental Authorization in terms of the National Environmental Management Act, 1998 (Act 107 of 1998) as amended read with the Environmental Impact Assessment (EIA) Regulations, 2014 as amended regarding an amendment application in respect of the Farm Strathfontein 252 IR, Farm Smithfield 44 IS, Farm Leeufontein 219 IR, and Straffontein 252 IR, within the Magisterial District of Witbank: Mpumalanga Region; dated 29 March 2023 with DMRE Reference no. (MP) 30/5/1/2/3/2/1/(305) EM.
- Final Environmental Impact Report (EIR) and Environmental Management Programme (EMP_r) for Zibulo North Shaft Project; dated June 2022 with DMRE Reference no. MP 30/5/1/2/2/305 MR.
- Water Use Licence in terms of Chapter 4 of the National Water Act, 1998 (Act no. 36 of 1998) for Anglo American Inyosi (Pty) Ltd Zibulo North Shaft Project; dated 30 October 2022 with Reference No. 06/B20E/CAJCICGI/12435.DMRE notification of ECO appointment for Zibulo North Shaft.
- Public Participation Report for the Scoping Phase, November 2021.
- ZNSEX-CED_LET-Z01-0009_0 – Confirmation of Employment of Professional Engineer.
- Engineer's Engineering Council of South Africa's Certificate.
- Zibulo North Shaft Complaint Form.
- Construction Stormwater Management Plan.
- Notification of the ECO appointment for the construction activities at Zibulo North Shaft dated 5 May 2023.
- THZNS-TRANSMIT-001538.
- Jedd Civil's PPE issuing register.
- Zibulo North Shaft Project infrastructure blockplan.
- Zibulo North Shaft Environmental Incident Register 2023.
- Ambient Air Quality Impact Study commissioned by Geovicon Environmental for Zibulo North Shaft Project, dated 03 December 2020.
- Thungela Resources Limited – Zibulo North Shaft Project Monthly Air Quality Monitoring Gravimetric Dust Fallout August 2023 Report.
- Environmental Noise Impact Assessment for Zibulo North shaft project, Njkangala District Municipality, Mpumalanga Province dated November 2020.
- EA, EMP_r and WUL Checklist_Sept_Oct 2023_Final.
- Proof of site delivery Manifest and Enviroserv Certificates.
- Thungela Zibulo North Shaft Emergency Preparedness Plan.
- *Thungela North Shaft Emergency Drill dated 07 August 2023*

- Zibulo Colliery North Shaft Project Surface Water Specialist Study Baseline Hydrology & Impact Assessment dated November 2021.
- Zibulo Colliery North Shaft Project - - Geohydrological Study dated November 2021
- Zibulo c 10 May 2023.
- Zibulo Colliery North Shaft Project Mandatory Code of Practice (“COP”) for Surface Fire Prevention approved on 27 March 2023.
- 41104759 ZNS Environmental Training material final.
- Zibulo Decline survey report dated 20 October 2023.
- Zibulo North Shaft TMM COP Requirements.
- Zibulo Colliery Waste Management Procedure Version 9 updated on 14 November 2023.

3.2. Site Verification

The site assessments, visual observation and review of relevant documentation were conducted on 02 November 2023 by Raisibe Mabiza (NTC), Ethel Chifunda (NTC), Sarah Burford (Pinsent Masons Africa LLP), Christin Kleingeld (Pinsent Masons Africa LLP), Maxwell Kasima (Thungela), Kabelo Sefike (Thungela) and Tiffany Seema (WSP), (refer to Appendix A: Attendance Register). During the site assessment, additional documents were collated, and information was verified, Thungela personnel were interviewed and selected areas were visited i.e., verified using photographic evidence presented in Appendix B: Photo Plate.

3.3. Assessment Methodology

NTC assessed each of the EA and EMP conditions per the criteria provided in **Error! Reference source not found.** Only conditions in the non-compliance category were given recommendations for rectification. The audit approach was guided by the requirements of the ISO 19011:2018 Guidelines for Auditing Management Systems. The audit scope was based on Section 34 and Appendix 7 of the EIA Regulations, 2014 as amended, which defines the key objectives of an audit as follows:

- Report on the level of compliance with the conditions of the EAs and the EMPs and the extent to which the avoidance, management and mitigation measures provided for in the EMPs;
- To identify and assess any new impacts and risks as a result of undertaking the activity.
- To evaluate the effectiveness of the EMPs;
- To identify shortcomings in the EMPs; and
- To identify the need for any changes to the avoidance, management and mitigation measures provided for in the EMPs.

Table 2: Assessment Criteria

Criteria	Acc	Description
Compliant	C	Full Compliance is when the construction or operational activities comply with the EMPr or EA conditions of authorisation. No mitigation measures are required where operations meet compliance.
Non-Compliant	NC	Non-Compliance is when construction or operational activities are in contravention with the EMPr or EA conditions of authorisation and have the potential to impact on the environment in a detrimental manner. Non-compliance may also be associated with activities breaching legislation.
Not Applicable	N/A	Not Applicable is assigned to EMPr or EA conditions which do not apply to current activities, fall outside the audit period, are duplicates of existing conditions and/or are conditions which must be noted by the holder of authorisation.

4. Audit Findings

This section presents the full audit findings of the Zibulo North Shaft Project IEA and EMPr as included in Section 4.1 and Section 4.2 below.

4.1. Zibulo North Shaft Project Integrated Environmental Authorization in terms of the National Environmental Management Act, 1998 (Act 107 of 1998) as amended read with the Environmental Impact Assessment (EIA) Regulations, 2014 as amended regarding an amendment application in respect of the Farm Strathfontein 252 IR, Farm Smithfield 44 IS, Farm Leeufontein 219 IR, and Straffontein 252 IR, within the Magisterial District of Witbank: Mpumalanga Region; dated 29 March 2023 with DMRE Reference no. (MP) 30/5/1/2/3/2/1/(305) EM.

EA NO	CONDITION	COMPL	FINDINGS/OBSERVATION
8. CONDITIONS			
8.1 STANDARD CONDITIONS			
8.1.1	Authorisation of the activity is subject to the conditions contained in this Authorisation, which forms part of the Environmental Authorisation and are binding on the holder of the Authorisation.	C	Zibulo has appointed Liezel Louw as the environmental management resource (viz. Environmental Specialist) to overlook compliance and give effect to the various licence conditions. Further to that, they have appointed an independent Environmental Compliance Officer to monitor and report on compliance with the conditions of the EA and EMPr during the construction phase (<i>DMRE notification of ECO appointment for Zibulo North Shaft</i>).
8.1.2	All issues raised by interested and affected parties must be taken into consideration during mining. Mitigation measures must be implemented to reduce negative impacts on the environment.	C	All issues raised by the interested and affected parties were incorporated into the Zibulo North Final Environmental Impact Report (EIR) and Environmental Management Programme (EMPr) for Zibulo North Shaft Project (<i>Thungela Anglo American Inyosi Coal Propriety Limited Public Participation Report for the Scoping Phase, November 2021</i>).
8.1.3	All comments by other state departments and agencies must be adhered to.	C	All issues raised by state departments and agencies were incorporated into Final Environmental Impact Report (EIR) and Environmental Management Programme (EMPr) for Zibulo North Shaft Project (<i>Thungela Anglo American Inyosi Coal Propriety Limited (A member of Thungela Resources Limited) Public Participation Report for the Scoping Phase, November 2021</i>).
8.1.4	The holder of the Authorisation shall be responsible for ensuring compliance with the conditions by any person acting on his or her behalf, including but not limited to, an agent, sub-contractor, employee or person rendering a service to the holder of Authorisation.	C	Compliance with the conditions of authorisations is currently assessed by the appointed independent Environmental Control Officer (ECO) through weekly and monthly ECO Audit Reports.
8.1.5	Any changes to, or deviations from, the project description set out in this Authorisation must be approved, in writing, by the Department before such deviations may be effected. In assessing whether to grant such approval or not, the Department may request such information as it deems necessary to evaluate the significance and impacts of such changes or deviations and it may be necessary for the holder of the authorisation to apply for further authorisation in terms of the Regulations.	C	No changes to, or deviations from the project description as set out in this Authorisation occurred during the audit period.
8.1.6	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, including the transfer of this authorisation, the applicant must in writing notify the Regional Manager of this Department, within fourteen (14) days of the above specific change.	N/A	Thungela indicated that there has not been any changes as described in this condition.
8.1.7	A copy of this authorisation must be kept on site. The Authorisation must be produced to any Government official(s) who may request to see it for inspection purposes and must be made available to the contractor(s) / subcontractor(s) authorised to undertake work at the property.	C	A copy of this authorisation has been placed on site and was verified by the auditors. Further to that, Thungela indicated that the appointed contractors have been furnished with a copy of the authorisation. An electronic copy is also available on the Thungela Shared Drive.
8.1.8	This authorisation does not negate the holder of the Authorisation's responsibility to comply with any other statutory requirements that may be applicable to the undertaking of the activity.	N/A	Condition has been noted by Thungela.
8.1.9	After an appeal period has expired and no good course to extend the appeal period has been submitted in accordance with Chapter 2 of the National Appeal Regulations of 2014, a thirty (30) day written notice must be given to the	N/C	Thungela submitted a <i>Notification of intent to commence construction activities at Zibulo Colliery (Zibulo North Shaft Project) Mine in Emalahleni</i> to the Department of Mineral Resources and Energy (DMRE) on 17 April 2023.

EA NO	CONDITION	COMPL	FINDINGS/OBSERVATION
	Department that the activity will commence. Commencement for the purpose of this condition includes site preparation. The notice must include a date to which it is anticipated that the activity will commence.		The notification indicated that construction activities will commence on 05 May 2023 and it was confirmed by Thungela that construction commenced on 05 May 2023. Thus the required (30) day written notification was not given to the Department as per the requirement of this condition.
8.2 SPECIFIC CONDITIONS			
8.2.1 COMMISSIONING OF THE ACTIVITY			
8.2.1.1.1	This Authorisation is hereby solely granted for the additional mining activity on the farm Strathfontein 252 IR, farm Smithfield 44 IS, farm Leeuwfontein 219 IR, farm Zondagfontein 253 IR, farm Colnge 34 IS, farm Welgelegen 221 IR situated within the magisterial district of Delmas: Mpumalanga region.	C	No evidence of non-compliance was observed. The additional mining activities are restricted to the specified locations (Figure 1).
8.2.1.2	The activity may not commence without the necessary permits/ licenses/ approvals and/or service agreements, where it is relevant, from or with the relevant regulatory authorities whether national, provincial or local.	C	The Zibulo North Shaft Project has the following environmental authorisations in place: - Integrated Environmental Authorization in terms of the National Environmental Management Act, 1998 (Act 107 of 1998) as amended read with the Environmental Impact Assessment (EIA) Regulations, 2014 as amended regarding an amendment application in respect of the Farm Strathfontein 252 IR, Farm Smithfield 44 IS, Farm Leeufontein 219 IR, and Straffontein 252 IR, within the Magisterial District of Witbank: Mpumalanga Region; dated 29 March 2023 with DMRE Reference no. (MP) 30/5/1/2/3/2/1/(305) EM. - Thungela Anglo American Inyosi Coal Propriety Limited (A member of Thungela Resources Limited) Final Environmental Impact Report (EIR) and Environmental Management Programme (EMPr) for Zibulo North Shaft Project; dated June 2022 with DMRE Reference no. MP 30/5/1/2/2/305 MR. - Water Use Licence in terms of Chapter 4 of the National Water Act, 1998 (Act no. 36 of 1998) for Anglo American Inyosi (Pty) Ltd Zibulo North Shaft Project; dated 30 October 2022 with Reference No. 06/B20E/CAJCICGI/12435.
8.2.1.3	The construction of all infrastructure must be done in accordance to the approved EIAR and EMPr.	C	Thungela indicated that there has been no deviations from the approved infrastructure designs. Further to that, the auditors did not observe any deviations and noted that the construction of infrastructure is as per the approved EIAR and EMPr (Figure 2).
8.2.1.4	Construction within the site must be carried out under the supervision of a professional Civil Engineer, registered under the Engineering Profession of South Africa Act, 2000 (Act 46 of 2000) and in line with approved designs.	C	Thungela has appointed Zutari as the Civil Engineering Consultants for the supervision of the construction activities within the site and the Responsible Engineer's Engineering Council of South Africa's (ECSA) Certificate was verified by the auditors (<i>ZNSEX-CED_LET-Z01-0009_0 – Confirmation of Employment of Professional Engineer & ECSA Certificate</i>).
8.2.1.5	The site, or any portion thereof must be covered and maintained in such a way that – - Prevents the formation of pools, and or damming due to rain; - Allow free surface runoff of rain-water; - Prevents the contamination of storm water; - Result to minimal or no erosion.	N/C	Storm water management measures are being implemented as per the <i>Construction Storm water Management Plan</i> which includes graded v-drains, berms to direct water, raised platform and pumping water from collection points into water carts. However, water damming (Appendix B: Figures 3, 4 & 11) and erosion was observed at various areas on the site as well as at the main access road (Appendix B: Figure 2).
8.2.1.6	The company must apply the principle of best practicable environmental option for all technologies used/ implemented during the project.	N/A	Condition has been noted by Thungela. Thungela's environmental policies make reference to the environmental stewardship and the environmental awareness training manuals make reference to best practice and legal requirements.
8.2.1.7 Pre-Construction Phase			

EA NO	CONDITION	COMPL	FINDINGS/OBSERVATION
a)	The applicant must appoint an independent Environmental Control Officer (ECO) who will monitor contractors, compliance with EIAR and EMPR together with the Environmental Authorisation.	C	Thungela has appointed WSP as the independent ECO to monitor compliance with the EA, EIAR and EMPR through weekly and monthly ECO Audit Reports (<i>Notification of the ECO appointment for the construction activities at Zibulo North Shaft dated 5 May 2023</i>).
b)	The applicant must provide all contractors and sub-contractors with a copy of EIAR and Environmental Management Programme, Environmental Authorisation, Specialist Studies and all other permits obtained from other State Departments prior to the mining activities.	C	Thungela indicated that the appointed contractors have been furnished with a copy of the authorisation via Aconex on 06 November 2023 (<i>THZNS-TRANSMIT-001538</i>).
c)	All pre-construction phase mitigation measures as outlined in the Environmental Management Programme attached in Environmental Impact Assessment report must be adhered to at all times.	N/C	Not all the pre-construction phase mitigation measures as outlined in the approved EMPR were found to be compliant.
d)	In order to ensure safety, all employees must be given the necessary personnel protective equipment (PPE).	C	PPE protocol is observed on site. It is part of the contractor's requirement to ensure that all employees have the necessary PPE prior to undertaking works on site (<i>Jedd Civil's PPE issuing register</i>).
e)	Appropriate notification sign must be erected at all sites affected by this amendment warning the public (residents, visitors etc.) about the hazards that may occur.	C	Warning signs have been erected at affected areas on site informing stakeholders about the hazards that may occur (Appendix B: Figures 1, 6 & 7).
f)	Construction must include design measures that allow surface and subsurface movement of water along the drainage lines so as not to impede natural surface and subsurface water flow, and drainage measures must promote the dissipation of stormwater runoff.	N/C	Storm water management measures are being implemented as per the <i>Construction Storm water Management Plan</i> which includes graded v-drains, berms to direct water, raised platform and pumping water from collection points into water carts. However, water damming (Appendix B: Figures 3, 4 & 11) and erosion was observed at various areas on the site as well as at the main access road (Appendix B: Figure 2).
g)	Construction areas, topsoil and subsoil must be protected from contamination or pollution. Stockpiling must not take place in drainage lines or areas where it will impede surface water runoff.	C	No contamination was noted at the construction area during the audit period (Appendix B: Figures 1 – 22). Stockpiling is undertaken at designated areas and in accordance to the approved block plan (Figure 2).
h)	If any soil contamination is noted at any phase of the proposed activity (ies), the contaminated soil must be removed to a licensed waste disposal facility and the site must be rehabilitated to the satisfaction of this Department and Department of Water and Sanitation. The opportunity for the onsite remediation and re-use of contaminated soil must be investigated prior to the disposal and this Department must be informed in this regard.	N/C	A hydrocarbon spillage occurred at the box cut on 18 October 2023 that resulted in soil contamination (<i>Zibulo North Shaft Environmental Incident Register 2023</i>). It is reported that the contaminated soil was disposed at a licensed hazardous waste disposal facility. However, no records of disposal thereof was provided to the auditor. Further to that, it is unclear whether the opportunity for onsite remediation and re-use of the contaminated soil was investigated prior to the contaminated soil disposal.
8.2.1.8 Access roads and traffic impact			
a)	Necessary signage and traffic measures must be implemented for safe and convenient access to the site from adjacent roads.	C	Warning signs have been erected to provide for safe and convenient access to the site from adjacent roads (Appendix B: Figures 1, 6 & 7).
b)	Access roads must be well maintained throughout the mining operation.	N/C	Erosion was observed at various areas on the site as well as at the main access road (Appendix B: Figure 2). Further to that, it was reported that there was road access issues to gain access to construction areas.
8.2.1.9 Air quality management			
a)	The recommendations outlined in the Air Quality Study must be strictly adhered to.	C	The recommendations from the <i>Ambient Air Quality Impact Study commissioned by Geovicon Environmental for Zibulo North Shaft Project</i> , dated 03 December 2020 are being implemented on the site. This includes the implementation of dust management measures such as dust suppression using a water truck (Appendix B: Figure

EA NO	CONDITION	COMPL	FINDINGS/OBSERVATION
			5), enforcing speed limits on site and implementing a Dust Fallout monitoring Programme (<i>Thungela Resources Limited – Zibulo North Shaft Project Monthly Air Quality Monitoring Gravimetric Dust Fallout August 2023 Report</i>).
b)	Proper measures must be put in place to suppress dust in order to minimize nuisance conditions.	C	Dust control measures such as dust suppression using a water truck (Appendix B: Figure 5), enforcing speed limits of 40km on site and keeping construction vehicles and equipment in good repair are implemented on site.
c)	A speed restriction of 40km/h must be enforced and monitored on site for all mine vehicles.	C	A speed restriction of 40km/h is enforced on the site.
8.2.1.10 Proliferation of alien species			
a)	All construction equipment and vehicles must be cleaned before entering and leaving the site to reduce the chances of spreading weeds and invasive species.	N/C	No cleaning of construction equipment and vehicles is undertaken before entering and leaving the site.
8.2.1.11 Noise			
a)	Recommendations set out in the Noise report must be strictly adhered to.	N/C	The <i>Environmental Noise Impact Assessment for Zibulo North shaft project, Nkangala District Municipality, Mpumalanga Province dated November 2020</i> recommended for inclusion in Authorisation that an Environmental Noise Monitoring Programme be implemented by an independent acoustical consultant. However, no Environmental Noise Monitoring Programme has been established.
b)	Construction activities must be limited to normal working hours (06h00 – 18h00).	N/C	Construction hours are currently not restricted to normal working hours (06h00 – 18h00) as there is currently an afternoon shift that starts at 18h00 pm and ends at 06h00am.
c)	Mine vehicles must be fitted with standard silencers prior to beginning of construction.	N/C	Thungela has indicated that no mine vehicles have been fitted with silencers prior to the beginning of construction.
8.2.1.12 Erosion control measures			
a)	All soil surfaces compacted as a result of mining/ construction activities must be ripped, and imported materials must be removed.	N/A	Condition does not apply to current activities as construction is still underway.
b)	Any erosion channel developed during mining/ construction period or during vegetation establishment must be restored to a proper condition.	N/C	Erosion was observed at various areas on the site as well as at the main access road (Appendix B: Figure 2).
8.2.1.13 Excavation activities			
a)	Topsoil must be stripped and stockpiled prior to excavation in a designated area.	C	Stripped soil horizons are stockpiled in designated areas (Appendix B: Figure 15).
b)	Under no circumstances should material stockpiles be disposed of outside the boundary of the mine area.	C	The designated material stockpile areas are within the mine boundary in accordance to the approved block plan (Figure 2) and no material is moved off-site.
8.2.1.14 Waste management			
a)	General waste must be kept in containers which are wind and scavenger proof and disposed of at a permitted landfill site. No temporary dumping and littering of waste is allowed on site.	C	General waste skips have been placed on site and they are disposed off at a permitted landfill site by Enviroserv who have been appointed to manage general waste and construction rubble (<i>Proof of site delivery Manifest, Enviroserv Certificates</i>).
b)	No waste must be disposed of through burying and burning.	C	No burning and burying of waste was undertaken on site during the audit period.

EA NO	CONDITION	COMPL	FINDINGS/OBSERVATION
c)	All hazardous waste must be disposed of at an official registered site, or be removed by registered hazardous waste contractors.	NC	Hazardous waste wheelie bins were observed on site (Appendix B: Figures: 17, 21 & 22). However, no evidence of the provision of hazardous waste management services by a service provider was provided thus the auditors could not verify where the hazardous waste that is generated on site is disposed.
d)	An emergency preparedness plan to address any pollution incidents (i.e such as oil spillage etc) that occur on site must be developed.	C	Thungela has developed a Procedure for Environmental Related Emergencies and Remediation which is included in Section 6 of the approved Thungela Propriety Limited (A member of Thungela Resources Limited) Final EIR and EMP. Further to that Anglo has developed a <i>Thungela Zibulo North Shaft Emergency Preparedness Plan</i> that includes an Emergency hazardous materials and spill response contact number.
e)	Waste must be dealt with in accordance with the attached specific conditions issued by the Department of Water and Sanitation (DWS). Attached as Appendix A.	NC	Thungela has indicated that no specific conditions issued by the DWS attached as Appendix A has been received to date.
8.2.1.12 Surface and groundwater contamination must be prevented and/or mitigated by implementation of the following conditions.			
a)	Recommendations set out in the surface water report and Groundwater Report must be strictly adhered to.	C	The recommendations from the surface the <i>Zibulo Colliery North Shaft Project Surface Water Specialist Study Baseline Hydrology & Impact Assessment dated November 2021</i> and the <i>Zibulo Colliery North Shaft Project - - Geohydrological Study dated November 2021</i> have been incorporated into the approved <i>Final Environmental Impact Report (EIR) and Environmental Management Programme (EMPr) for Zibulo North Shaft Project; dated June 2022 with DMRE Reference no. MP 30/5/1/2/2/305 MR</i> which is being implemented on the site.
b)	Specific area must be demarcated for fueling, workshop services and parking areas and such areas must be bunded to reduce the possibility of soil and water contamination.	NC	Zibulo North indicated that refuelling is undertaken at various designated refuelling areas on site, however, the areas are not bunded. A bunded workshop service area which was flooded was observed on site (Appendix B: Figure 19). The flooding at the workshop service area has the potential to cause soil and water contamination from contaminated storm water emanating from the area. The parking areas on site are not bunded.
c)	Irrespective of the nature of a spillage (whether major or minor), all spillages must be cleaned up as soon as they occur.	C	Zibulo North indicated that the spillages that were recorded on the <i>Incident Register update 2023</i> were remedied as soon as they occurred. No spillages were observed at the time of the site assessment.
d)	Spillage of petrochemical products must be avoided. In the case of accidental spillage, contaminated soil must be removed for bioremediation or disposed of at a facility for the substance concerned. Disturbed land must be rehabilitated and seeded with vegetation seed naturally occurring on site.	NC	Zibulo North confirmed that the accidental spillages that were recorded on the site's <i>Incident Register update 2023</i> were disposed as hazardous waste, however, no records of hazardous waste disposal were provided for verification.
8.2.1.13 Fire prevention and management			
a)	Fire extinguishers that are in good working conditions must be made available at all times for their usage during the occurrence of accidental fires.	C	All fire extinguishers have been inspected and signed off for usage on site (Appendix B: Figure 18).
b)	Workers must be adequately trained in the handling of firefighting equipment.	C	Workers have been trained in the handling of firefighting equipment and training certificates were verified by the auditor (<i>Zibulo c 10 May 2023</i>). Thungela has developed a <i>Zibulo Colliery North Shaft Project Mandatory Code of Practice ("COP") for Surface Fire Prevention approved on 27 March 2023</i> .
c)	Open fires must strictly be prohibited.	C	No open fires are permitted on the site. Anglo has indicated that this is communicated to site personnel through toolbox talks (<i>41104759 ZNS Environmental Training material final</i>).
d)	Smoking must be prohibited in the vicinity of flammable substances.	C	Designated smoking areas have been established on site and are not in the vicinity of flammable substances.
e)	Cooking and heating fires must be permitted only in designated areas with appropriate safety measures.	C	No cooking and heating fires are permitted on the site. Anglo has indicated that this is communicated to site personnel through toolbox talks (<i>41104759 ZNS Environmental Training material final</i>).

EA NO	CONDITION	COMPL	FINDINGS/OBSERVATION
8.2.1.14 Storm water management			
a)	Storm water management plan must be developed, and implemented on site.	NC	A storm water management plan has been developed (<i>Construction Storm water Management Plan</i>) which includes graded v-drains, berms to direct water, raised platform and pumping water from collection points into water carts as management measures. However, water damming (Appendix B: Figures 3, 4 & 11) and erosion was observed at various areas on the site as well as at the main access road (Appendix B: Figure 2), demonstrating either a lack of implementation, or poor implementation of the plan.
8.2.1.15 Safety			
a)	Potentially hazardous area must be demarcated with danger tape.	C	Construction netting and safety berms are utilised in areas to demarcate dangerous areas such as heavy equipment storage and excavations (Appendix B: Figure 9 & 17).
b)	Appropriate signage must be placed to caution employees and contractors not to attempt to enter certain structures without being authorised.	C	Warning signs have been erected to indicate dangerous areas (Appendix B: Figures 6 & 7) such as heavy equipment storage and excavations. Construction netting and safety berms are utilised in areas where there is no warning signage yet (Appendix B: Figure 9 & 17).
8.2.1.16 Emergency Response Plan			
a)	An Emergency Response Plan should be available for accidental spills and firefighting during both construction and operation of the project.	C	Thungela has developed a Procedure for Environmental Related Emergencies and Remediation which is included in Section 6 of the approved Final EIR and EMP. Further to that the ECO has developed a <i>Thungela Zibulo North Shaft Draft Emergency Preparedness Plan</i> that includes an Emergency hazardous materials and spill response contact number.
b)	In the event of emergency, the holder must notify the department within 24hrs, and contact relevant emergency services in the area.	C	No emergency situations occurred during the audit period. Zibulo North has conducted Emergency drills to prepare for emergency situations (<i>Thungela North Shaft Emergency Drill dated 07 August 2023</i>).
c)	All significant pollution incidents must be reported to this Department within forty eight (48) hours of occurrences.	C	No significant pollution incident occurred at the site during the audit period. It must be noted that a hydrocarbon spillage occurred at the box cut on 18 October 2023 that resulted in soil contamination (<i>Zibulo North Shaft Environmental Incident Register 2023</i>). However, the incident was poorly recorded as there is no incident report that outlines the soil type that was contaminated (i.e.. Topsoil, subsoil, overburden, carbonaceous material) and the extent of contamination has not been recorded.
8.2.1.18 Compliance with other legislation			
a)	The National Environmental Management Act, 1998 (Act 107 of 1998), with particular reference to the principles in chapter 2 of the said Act.	N/A	Condition has been noted by Zibulo North Shaft.
b)	The National Water Act, 1998 (Act 36 of 1998), with particular reference to the sections pertaining to activities in the proximity of dams and their catchments areas, rivers, marshes, streams, pans and other water courses.	N/A	Condition has been noted by Zibulo North Shaft.
c)	The issuance of this authorisation does not exempt the license holder from compliance with any other legislation including Section 40 of the National Water Act, 1998 (Act 36 of 1998).	N/A	Condition has been noted by Zibulo North Shaft.
d)	The National Environmental Management Air Quality Act (Act 36 of 2004), with particular reference to the sections pertaining to the liberation of dust, and other emissions, created by mining related activities (stockpile), into the atmosphere.	N/A	Condition has been noted by Zibulo North Shaft.

EA NO	CONDITION	COMPL	FINDINGS/OBSERVATION
e)	The Conservation of Agriculture Resources Act, 1983 (Act 43 of 1983), with particular references to the sections pertaining to soil conservation.	N/A	Condition has been noted by Zibulo North Shaft.
f)	The National Heritage Resources Act, 1989 (Act No 25 of 1999), with particular reference to the protection of all historical and pre-historical cultural remains.	N/A	Condition has been noted by Zibulo North Shaft.
g)	The Mine Health and Safety Act, 1996 (Act 29 of 1996) in conjunction with the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002), with particular reference to those sections and regulations pertaining to health and safety at mines; mining within 100 m from structures (silos), that must be protected; as well as those sections pertaining to rehabilitation of the surface.	N/A	Condition has been noted by Zibulo North Shaft.
h)	All provisions of the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) and any other applicable legislation must be adhered to by the holder of this Authorisation.	N/A	Condition has been noted by Zibulo North Shaft.
i)	The National Environmental Management Waste Act (Act No. 59 of 2008).	N/A	Condition has been noted by Zibulo North Shaft.
8.2.1.19 Liability of the holder of this Authorisation			
a)	The competent authority shall not be held responsible for any damages or losses suffered by the holder or his/her successor in title in any instance where reclamation/ construction or operation subsequent to construction are to be temporarily or permanently stopped for reasons of non-compliance by the holder with conditions of approval as set out in the document or any other subsequent document emanating from this Authorisation. The holder shall be responsible for all the costs necessary to comply with the above condition unless otherwise specified.	N/A	Condition has been noted by Zibulo North Shaft.
b)	Any complaint from the public during the life of mine must be attended to by the holder of this Authorisation as soon as possible to the satisfaction of parties concerned.	C	No complaint was received from the public during the audit period. There is currently a complaint register available to record contentions from affected parties (<i>Zibulo North Shaft Complaint Form</i>). Zibulo North Colliery indicated that a Community Liaison Officer has been appointed to engage directly with the public relating to the project.
c)	The contractor must ensure that serviceable ablution facilities are available for employees. It is the responsibility of the holder of the Authorisation to see to it that this condition is adhered to.	NC	Chemical toilets are used on site (Appendix B: Figure 10) and are cleaned and serviced by Tallisman, however, Tallisman disposal records were not provided for verification.
8.2.2 MANAGEMENT OF THE ACTIVITY			
a)	A copy of the approve EIAR and EMPR, Environmental Authorisation and all other licenses and permits must always be available on site so as to monitor compliance with conditions outlined in both the documents. All documents must be used as on-site reference document during the project duration.	C	A copy of approved EIAR and EMPR has been placed on site and was verified by the auditors. Further to that, Zibulo North indicated that the appointed contractors have been furnished with a copy of the authorisation.
b)	The EIAR and EMPR (attached to the EIA Report) must be adhered to during the life of the mine.	C	The EIAR and EMPR (attached to the EIA Report) is being implemented on the construction site.
c)	All duties and responsibilities as outlined in the EA are binding throughout the life of the mine.	N/A	Condition has been noted by Zibulo North Shaft.
d)	Any proposed amendments to the Environmental Management Programme (as a result of this authorisation or otherwise) must be submitted in writing to this Department for approval prior to the amendment being implemented. On approval of the proposed amendment the EMP must be accordingly amended and adhered to.	N/A	Condition has been noted by Zibulo North Shaft.
8.2.3 Environmental Control Officer			

EA NO	CONDITION	COMPL	FINDINGS/OBSERVATION
a)	An Environmental Control Officer who will monitor and ensure compliance and correct implementation of all mitigation measures and provisions stipulated in the approved EIAR and EMPR, Environmental Authorisation and all other licenses and permits, prior to any commencement of mining activities on site must be appointed.	C	Zibulo North has appointed WSP as the independent ECO to monitor compliance with the EA, EIAR and EMPr through weekly and monthly ECO Audit Reports (<i>Notification of the ECO appointment for the construction activities at Zibulo North Shaft dated 5 May 2023</i>).
b)	The Environment Control Officer must monitor the construction of the infrastructure to ensure that the layout plans are in accordance to the designs and record important findings of the site inspection.	C	The appointed independent ECO monitors compliance with the EA, EIAR and EMPr through weekly and monthly ECO Audit Reports and ensure that the layout plans are in accordance to the designs and record important findings of the site inspection. The <i>EA, EMPr and WUL Checklist_Sept_Oct 2023_Final</i> was verified by the auditor.
c)	The Environment Control Officer must also monitor the implementation of specific elements of the Environmental Management Programme by contractors.	C	The appointed independent ECO monitors the implementation of specific elements of the Environmental Management Programme by contractors. The <i>EA, EMPr and WUL Checklist_Sept_Oct 2023_Final</i> was verified by the auditor.
d)	All duties and responsibilities as outlined in the Environmental Management Programme attached are binding throughout the life of project/ mine.	N/A	Condition has been noted by Zibulo North Shaft.
8.2.4 Site Closure and Decommissioning			
a)	The commissioning and decommissioning of individual activity within the overall listed mining activity must take place within the phases and timeframes as set out in EMPr.	N/A	Condition has been noted by Zibulo North Shaft.
b)	The application for closure indicated above must be submitted together with all relevant documents as indicated in Section 43 of Mineral and Petroleum Resources Development Act (Act 28 of 2002), as amended.	N/A	Condition has been noted by Zibulo North Shaft.
c)	All mitigation measures for the decommissioning phase, as outlined in the EA. The holder of EA must apply for a closure certificate in terms of Section 43 of Mineral and Petroleum Resources Development Act (Act 28 of 2002), as amended within 180 days of occurrence of lapsing, abandonment, cancellation, cessation, relinquishment and completion of the operation.	N/A	Condition has been noted by Zibulo North Shaft.
8.3 MONITORING			
a)	This Department reserves the right to monitor and audit the activity to ensure compliance with legislation and the conditions stipulated in this authorisation.	N/A	Zibulo North indicated that there has been no Authority Visit during the audit period.
b)	The Environmental Mineral Resource Inspectors (EMRIs) of this Department may conduct an Inspection at any time without any appointment and inspect all parts of the approved Mining area. Please note that the conducting mining and related activities outside the approved EIA and EMPr together with the approved plan this will be considered as non-compliance and a notice will be issued to the company in terms of Section 31L of NEMA.	N/A	Condition has been noted by Zibulo North Shaft.
c)	It is the holder of this Authorisation's responsibility to ensure that an ongoing management and monitoring of the impacts of the activity on the environment throughout the life of the mine is put into practice.	C	Zibulo North implements an Environmental Management System (EMS) through the implementation of operational Procedures and adherence to Environmental Authorisations. Thungela has appointed environmental management resources (<i>viz.</i> Environmental Specialist) who overlooks compliance and give effect to the various licence conditions. Further to that, they have appointed an independent Environmental Compliance Officer to monitor and report on compliance with the conditions of the EA and EMPr during the construction phase (<i>DMRE notification of ECO appointment for Zibulo North Shaft</i>).
d) Water monitoring			

EA NO	CONDITION	COMPL	FINDINGS/OBSERVATION
	Recommendation cited in the specialist report must be strictly adhered to.	C	The recommendations from the surface the <i>Zibulo Colliery North Shaft Project Surface Water Specialist Study Baseline Hydrology & Impact Assessment dated November 2021</i> and the <i>Zibulo Colliery North Shaft Project - - Geohydrological Study dated November 2021</i> have been incorporated into the approved <i>Final Environmental Impact Report (EIR) and Environmental Management Programme (EMPr) for Zibulo North Shaft Project; dated June 2022 with DMRE Reference no. MP 30/5/1/2/2/305 MR</i> which is being implemented on the site.
	The company must implement ground water monitoring on quarterly basis in order to quantify impacts on ground water resources during construction, operation and decommissioning phases.	C	Zibulo North undertakes quarterly Ground water monitoring and the monitoring results for September 2023 were provided for verification in the <i>Zibulo North Shaft Water Quality Monitoring Report Q3: July – Sep 2023</i> . The monitoring results for the sampled points were under the baseline groundwater quality limit as prescribed in the Water Use Licence in terms of Chapter 4 of the National Water Act, 1998 (Act no. 36 of 1998) for Anglo American Inyosi (Pty) Ltd Zibulo North Shaft Project; dated 30 October 2022 with Reference No. 06/B20E/CAJCICGI/12435.
	Early warning leachate detection system, seepage interception trenches as well as controls shall be put in place to minimise the impacts of pollution and to allow timely control of contamination incidents.	N/A	Condition does not apply to the current activities at Zibulo North Shaft Project as construction of these underway. This condition will be audited during the operational phase of the mine. In addition, the trenches have not yet been constructed.
	In the event that the ground water and downstream users are affected by migration of pollution from the mine residue deposits the company shall compensate such affected water users with portable water as directed by the responsible authority.	N/A	Condition has been noted by Zibulo North Shaft.
	The groundwater monitoring (quality and quantity) must be extended to cover both upstream and upstream and downstream of the mine residue deposits historic and expansion areas.	C	Zibulo North is currently in the process of drilling additional groundwater monitoring boreholes (<i>Zibulo North Shaft Water Quality Monitoring Report Q3: July – Sep 2023</i>).
	The groundwater monitoring (quality and quantity) must be extended to cover shallow monitoring boreholes adjacent to the existing ones to monitor.	C	Zibulo North is currently in the process of drilling additional groundwater monitoring boreholes (<i>Zibulo North Shaft Water Quality Monitoring Report Q3: July – Sep 2023</i>).
	The effects of mine residue deposits facility on the shallow aquifer.	C	Zibulo North is currently in the process of drilling additional groundwater monitoring boreholes (<i>Zibulo North Shaft Water Quality Monitoring Report Q3: July – Sep 2023</i>).
	The applicant must develop groundwater remediation plan to ensure that the corrective measures are implemented for the identified pollution. The plan must be submitted to the Department of Water and Sanitation for approval.	C	Zibulo North is currently in the process of drilling additional groundwater monitoring boreholes (<i>Zibulo North Shaft Water Quality Monitoring Report Q3: July – Sep 2023</i>).
e) Detection monitoring			
	Monitoring for groundwater quality must be considered for variables listed as per the EIAR on quarterly basis or such frequency as may be determined by the responsible authority.	C	Zibulo North undertakes quarterly Ground water monitoring and the monitoring results for September 2023 were provided for verification in the <i>Zibulo North Shaft Water Quality Monitoring Report Q3: July – Sep 2023</i> .
f) Investigative monitoring			
	If, in the opinion of the responsible authority, a water quality variable listed under the detection monitoring programme, shows an increasing trend, the license holder shall initiate a monthly monitoring programme until such a time that the variable is within acceptable limits confirmed by the responsible authority.	N/A	Condition has been noted by Zibulo North Shaft.
METHODS OF ANALYSIS			
	The License Holder shall carry out all tests in accordance with methods prescribed by and obtainable from the South African Bureau of Standards (SABS), referred to in the standards Act, 2008 (Act 08 of 2008), to analyse the samples taken under the monitoring programmes.	C	Zibulo North makes use of Acquatico as the SANAS accredited laboratory to analyse the samples taken under the monitoring programmes.

EA NO	CONDITION	COMPL	FINDINGS/OBSERVATION
	The License Holder shall only use another method of analysis if written proof that the method is at least equivalent to the SABS method and is confirmed by the responsible authority.	N/A	Condition has been noted by Zibulo North Shaft.
8.4 RECORDING AND REPORTING TO THE DEPARTMENT			
AUDITING			
Audits and inspections			
	The responsible authority reserves the right to audit and/ or inspect the site at any time and at such a frequency as the responsible authority may decide, or to have the site audited or inspected.	N/A	Condition has been noted by Zibulo North Shaft.
	The License Holder must make any records or documentation available to the responsible authority upon request, as well as any other information the responsible authority may require.	N/A	Condition has been noted by Zibulo North Shaft.
REPORTING			
Reporting of incidents			
	The License Holder must, within 24 hours, notify the responsible authority of the occurrence or detection of any incident on the site which has the potential to cause or has caused water pollution.	N/A	Condition has been noted by Zibulo North Shaft.
	The license holder must, within 14 days, or a shorter period of time, if specified by the responsible authority, from the occurrence of detection of any incident to the responsible authority to measures taken to – - Correct the impact resulting from the incident; - Prevent the incident from causing any further impacts; and - Prevent a recurrence of a similar incident.	N/A	Condition has been noted by Zibulo North Shaft.
	In the event that measures have not been implemented within 21 days to address impacts caused by the incident or measures which have been implemented are inadequate, the responsible authority may implement the necessary measures at the cost and risk of the license holder.	N/A	Condition has been noted by Zibulo North Shaft.
Other reports			
	The information required in terms of water monitoring must be reported to the responsible authority in a yearly report. The information must also be included into a trend report, which must contain a graphical presentation of all monitoring results of obtained previously, as well as an interpretation and discussion of the reports of each monitoring occasion.	N/A	Condition has been noted by Zibulo North Shaft.
	The license holder must submit a written report to the responsible authority regarding any deviations from described in this authorisation and must obtain written permission from the responsible authority before such deviations may be implemented.	NC	Zibulo North has submitted written communication to address the administrative omissions and inaccuracies on the Zibulo North Shaft Project Integrated Environmental Authorisation (IEA) inclusive of the request to provide the Appendix A document referred to in Condition 8.2.1.14. e) above and the request to change the construction activities working hours to 24 hours. However, no written response has been provided by the responsible authority. A deviation from the requirements of condition 8.2.1.11. b) was noted as construction hours are currently not restricted to normal working hours (06h00 – 18h00).

EA NO	CONDITION	COMPL	FINDINGS/OBSERVATION
	The authorisation holder must submit an annual environmental audit report during the operation of the activity, unless otherwise requested by the department. The audit must convey the following: - The date in which the audit was carried out; - The outcome of the audit, in relation to the conditions stipulated in the environmental authorisation and the EMP as well as the actions taken to mitigate environmental impacts on site; - Records of monitoring and/or auditing must be made available for inspection to this Department and any other relevant authority inspecting the development activities. - Records relating to compliance and non-compliance with the conditions of this authorisation must be kept in good order. Such records shall be made available to this Department within seven (7) days of receipt of a written request by the Department. Environmental compliance will further be monitored through complaints received from the public. - All records relating to the implementation of the Environmental Management Programme must be kept in the office where it is safe and can be retrievable.	C	NTC Group (Pty) Ltd was appointed by Thungela as the independent auditor Environmental Assessment Practitioner (EAP) to undertake the 2023 External Annual Environmental auditor and this report presents the methodologies, findings thereof and fulfils the compliance assessment requirement.
8.5 NON-COMPLIANCE			
	In the event of non-compliance by any contractor during the construction/operation of the authorized activity, the holder of this Authorisation will be liable.	N/A	Condition has been noted by Zibulo North Shaft.
	The holder shall be responsible for all costs necessary to comply with the above conditions unless otherwise specified.	N/A	Condition has been noted by Zibulo North Shaft.
	The holder must in the event of non-compliance with any condition of this Authorisation inform the Regional Manager of Mpumalanga region of this Department, in writing, within forty-eight (48) hours.	N/A	Condition has been noted by Zibulo North Shaft.
	Non-compliance to this authorisation is an offence as provided for in terms of the National Environmental Management Act, 1998, Section 49(a) and Regulation 48. Any conviction of such offence may result in Section 49(a) being enforced.	N/A	Condition has been noted by Zibulo North Shaft.
9. APPEAL OF AUTHORISATION			
	The holder of the authorisation must notify every registered interested and affected party, in writing and within fourteen (14) days, of receiving the Department's decision. The notification must – - Specify the date on which the Authorisation was issued. - Inform the registered interested and affected parties of the appeal procedure provided for in Chapter 2 of the National Appeal Regulation of 2014. - Advise the interested and affected parties that a copy of the Authorisation and reasons for the decision will be furnished on request. An appeal against the decision must be lodged in terms of Chapter 2 of the National Appeal Regulations of 2014	C	The <i>Integrated Environmental Authorization in terms of the National Environmental Management Act, 1998 (Act 107 of 1998) as amended read with the Environmental Impact Assessment (EIA) Regulations, 2014 as amended regarding an amendment application in respect of the Farm Strathfontein 252 IR, Farm Smithfield 44 IS, Farm Leeufontein 219 IR, and Straffontein 252 IR, within the Magisterial District of Witbank: Mpumalanga Region; dated 29 March 2023 with DMRE Reference no. (MP) 30/5/1/2/3/2/1/(305) EM</i> was granted on 29 March 2023 and the public notification was sent out on 06 April 2023 which falls within the prescribed fourteen (14) days. The notification provided information on the date the Authorisation was issued, the manner in which the decision could be accessed and informed the Interested & Affected Party (I&AP) of the appeal procedure.

4.2. Thungela Zibulo North Shaft Propriety Limited Final Environmental Impact Report (EIR) and Environmental Management Programme (EMPr) for Zibulo North Shaft Project; dated June 2022 with DMRE Reference no. MP 30/5/1/2/2/305 MR

Impact Activity Reference	Environmental Attribute	Management Actions and Interventions	Compl	Findings/Observation
PRE-CONSTRUCTION AND CONSTRUCTION PHASE				
Activity 34 of Listing Notice 1 and Activity 15 of Listing Notice 2: The extension of the underground mine workings and the construction of the Decline Shaft Box cut.				
The construction of the decline shaft box cut will lead to compaction of soil resources due to increased traffic, which may cause erosion of soils due to increased runoff water velocities. The establishment of the box cut will result in the stropping of arable soils with medium-high agricultural potential, which will result in the loss of agricultural/soil potential.	Soils, Land Use and Land Capability	The topsoil from the box-cut area will be stripped and stockpiled at a topsoil stockpiling area.	C	Stripped topsoil from the box-cut area is stockpiled at the designated topsoil stockpile area (Appendix B: Figure 15).
		The topsoil stockpile will not exceed a height of five meters, which will assist in minimizing compaction of the soils.	NC	The <i>Zibulo Decline survey report dated 20 October 2023</i> depicts that there are areas on the topsoil stockpile that exceed the five meters height restriction.
		The stockpiled topsoil will be seeded with a recommended seed mix to ensure that a good vegetation cover is achieved, if the natural seed-back doesn't create sufficient cover.	N/A	Condition does not apply to the current activities of the Zibulo North Shaft Project as the topsoil stockpiling is underway.
		No mixing of the topsoil material with subsoil, softs (clean overburden) and hard overburden material (contaminated overburden) will be allowed.	NC	Mixing of the topsoil with softs was observed at the designated stockpile area ((Appendix B: Figure 15).
		In cases where compaction and/or erosion does occur, action plans should be implemented to apply mitigation.	NC	Erosion was observed at various areas on the site as well as at the main access road (Appendix B: Figure 2), however, no action plans are implemented to apply mitigation.
During the construction phase of the decline shaft, topsoil removed will be stripped and stockpiled for future use. This may result in the following impacts: Areas that have been stripped of vegetation and topsoil will be prone to erosion. This could lead to increased suspended solids being deposited into the local streams. It is unlikely that impacts will extend beyond the Leeuwfonteinspruit and the Leeuwfonteinspruit tributary.	Surface Water	The storm water diversion structures will be constructed in accordance with the project's civil designs approved by the DWS, which shows the storm water management systems' silt control and erosion protection.	C	The storm water infrastructure is currently under construction in accordance with the DWS Approved designs (Appendix B: Figures 13 & 14).
		Areas that are stripped will be optimised to limit unnecessary stripping.	C	Soil stripping is conducted in a phased approach and only occurs prior to the commencement of construction in a particular area.
		Storm water from upslope of the stripped areas will be diverted around these areas to limit the amount of storm water flowing over from these areas.	NC	The permanent storm water infrastructure is yet to be constructed and temporary storm water management measures are being implemented as per the Construction Storm water Management Plan which includes graded v-drains, berms to direct water, raised platform and pumping water from collection points into water carts. However, water damming (Appendix B: Figures 3, 4 & 11) and erosion was observed at various areas on the site.
		The timing of the topsoil stripping will be optimised to limit the time between stripping and construction. Where practical constraints exist and areas need to be left stripped for long periods, contour ploughing, or ripping could reduce run-off and hence reduce erosion.	C	Topsoil stripping is conducted in a phased approach and only occurs prior to the commencement of construction in a particular area.

		Dry season construction is preferable where practical.	C	Construction commenced on 05 May 2023 which afforded the opportunity for topsoil stripping activities to be concentrated in the dry season.
		The construction site will be optimised to limit over stripping. This will ensure that the generation of unnecessary volumes of silted water is controlled on site.	C	No over stripping was observed at the time of the site assessment.
		The constructed storm water diversion structures will be maintained in good order, which will include the cleaning of the structures where necessary.	N/A	The constructed storm water diversion structure is yet to be constructed; thus the condition does not apply to current activities at the Zibulo North Shaft Project.
		Any damage within the constructed storm water diversion structures will be repaired as soon as possible.	N/A	The constructed storm water diversion structure is yet to be constructed; thus the condition does not apply to current activities at the Zibulo North Shaft Project.
		Divert clean runoff water away from the decline shaft to minimize surface flow into the working area.	C	Temporary berms have been constructed to divert clean runoff and to minimise surface flow in the working area.
Deterioration of water quality in the Wilge River.		Storm water diversion structures (berms and trenches) will be constructed to divert clean water runoff to the storm water systems.	N/A	The storm water diversion structure is yet to be constructed; thus the condition does not apply to current activities at the Zibulo North Shaft Project.
		Areas that are to be stripped of topsoil will be optimised to limit unnecessary stripping.	C	Soil stripping is conducted in a phased approach and only occurs prior to the commencement of construction in a particular area.
		Excessive sedimentation of storm water run-off from the site will be prevented.	C	No excessive sedimentation was observed on site at the time of assessment.
		Mine vehicles and machinery used during the construction phase must be well maintained.	C	Mine vehicles and machinery are maintained regularly and inspection records were verified by the auditors. Further to that Anglo implements the <i>Zibulo North Shaft TMM COP Requirements Procedure</i> on site.
During the construction phase of the decline shaft, a significant number of vehicles will be driving around the site. In addition to this, fuels are stored on site and chemicals are used during normal construction activities. This may result in the following impacts: If the construction vehicles are poorly maintained hydrocarbon spills could cause pollution if washed off roads by storm water. Vehicle wash bays are a common source of hydrocarbon pollutants. Leaks from fuel depots could result in surface water pollution. Spillage and unsafe storage of chemicals could result in surface water contamination.	Groundwater	The existing procedures for containment and remediation any accidental hydrocarbon or other chemical spillages will be adhered to.	C	Zibulo North implements a Procedure for Environmental Related Emergencies and Remediation which is included in Section 6 of the approved Final EIR and EMPr. Further to that Anglo implements a <i>Thungela Zibulo North Shaft Emergency Preparedness Plan</i> that includes an Emergency hazardous materials and spill response contact number.
		Any incidents relating to hydrocarbon contamination should be investigated. If the impact is perceived to be significant, a hydrocarbon contamination specialist should be consulted for further recommendations.	NC	No significant pollution incident occurred at the site during the audit period. It must be noted that a hydrocarbon spillage occurred at the box cut on 18 October 2023 that resulted in soil contamination (<i>Zibulo North Shaft Environmental Incident Register 2023</i>). However, the incident was poorly recorded as there is no incident report that outlines the soil type that was contaminated (i.e.. Topsoil, subsoil, overburden, carbonaceous material) and the extent of contamination has not been recorded. No proof of investigation was provided and the mine confirmed that no soil testing was conducted.
		Mine machinery will be repaired at designated areas fit for purpose. No maintenance outside the dedicated areas will be allowed unless it is an emergency repairs which must be on a protected ground or by use of drip trays.	NC	The mine is still under construction and as such no workshops have been constructed for machinery and vehicle maintenance. However, site personnel noted that there are areas used for emergency works but these are not demarcated. In addition, A concrete vehicle maintenance slab has been

				constructed on site (Appendix B: Figure 19), however, the area is prone to water damming which may lead to soil contamination of adjacent areas and/or seepage from the contaminated storm water.
		All hydrocarbon liquids will be stored in leak and corrosion resistant containers. These containers will be placed in bunded areas. The containers used for the storage of hydrocarbon liquids will be maintained in good condition.	C	Hydrocarbon liquids are stored in a leak and corrosion resistant bunded storage cage (Appendix B: Figure 20). The storage containers were observed to be in good condition,
		Training, which will be in accordance with the requirements of the norms and standards for the waste storage facilities will be conducted for employees working with waste, including contractors' employees.	C	Zibulo North indicated that waste management training was provided to employee and contractors through Toolbox Talk conducted by the ECO (41104759 ZNS <i>Environmental Training material final</i>).
		All spillages must be contained and the affected areas remedied. An emergency preparedness plan will be used. Where necessary, enough supply of absorbent fibre will be kept at site to contain accidental spills.	C	The spillages that were recorded on the <i>Incident Register update 2023</i> were remedied. No spillages were observed at the time of the site assessment. Zibulo north implements a Procedure for Environmental Related Emergencies and Remediation which is included in Section 6 of the approved Final EIR and EMP. Further to that Zibulo implements an <i>Emergency Preparedness Plan</i> that includes an Emergency hazardous materials and spill response contact number. Spill kits were observed on site to handle hydrocarbon spills should they occur (Appendix B: Figure 10).
		Credible waste collectors will be used for the removal of waste from the site to a registered waste disposal facility.	NC	Although general waste is disposed of at a permitted landfill site by Enviroserv who have been appointed to manage general waste and construction rubble (<i>Proof of site delivery Manifest, Enviroserv Certificates</i>), no records of hazardous waste disposal and Talisman chemical toilet waste disposal was provided to the auditor.
		Wash bay discharge water must flow through an oil separator.	N/A	The wash bay that will be located at the Shaft administration complex as per the Project Scope of Work is yet to be constructed thus this condition does not apply to current activities on site.
		Fuel depots and refuelling areas must be bunded.	NC	Zibulo North indicated that refuelling is undertaken at various designated refuelling areas on site, however, the areas are not bunded.
The excavation of the decline shaft will result in the removal of vegetation cover from the stripping of topsoil, which will lead to the loss of habitat. It must, however, be noted here that the area to be used for development of the above facility has limited natural vegetation due to the extensive disturbance from the current agricultural activities.	Natural Vegetation	Chemicals must be stored in a central secure and bunded area.	C	Chemicals are stored in a secure and bunded storage cage (Appendix B: Figure 20).
		Ensure that construction activities are limited within the approved development footprint.	C	Construction activities are limited to the approved development footprint.
		Stockpile removed topsoil on a topsoil stockpile area separate from clean and contaminated overburden materials.	NC	Mixing of the topsoil with softs was observed at the designated stockpile area ((Appendix B: Figure 15).
During the construction phase of the decline shaft, as activities are taking place adjacent to wetlands, there is a possibility that water quantity and quality can be impaired	Sensitive Landscape	A buffer zone of a minimum of 30m recommended between the North Shaft infrastructure area (which include the decline shaft) and the adjacent wetland habitat will be adhered to.	C	The recommended buffer zone of 30m has been maintained at Zibulo North Shaft Project.

through contaminated surface runoff entering the wetlands. Typically, impairment will occur as a consequence of sediment disturbance resulting in an increase in turbidity. Water quality may also be impaired as a consequence of accidental spillages and the intentional washing and rinsing of equipment within the wetlands. It is possible that hydrocarbons will be temporarily stored and used on site, as well as cement and other potential pollutants.	All disturbance footprints will be separated from adjacent wetlands by a fence, either a security fence or as minimum a five-strand cattle fence (ideally not utilising barbed wire). The purpose of the fence is to clearly demarcate sensitive areas and prevent accidental vehicle and construction machinery access to these areas.	C	A security fence has been erected around the site (Appendix B: Figure 12).
	All construction staff will be educated on the sensitivity of wetland areas and will be made aware of all wetland areas in close proximity to the construction sites.	C	Zibulo North indicated that staff was educated on the sensitivity of wetlands areas through the Toolbox Talk conducted by the ECO (41104759 ZNS Environmental Training material final).
	Develop and implement a construction storm water management plan prior to the commencement of site clearing activities. Such a plan should aim to minimise the transport of sediment off site. Berms will be constructed to manage the silt from the construction site.	NC	Storm water management measures are being implemented as per the <i>Construction Storm water Management Plan</i> which includes graded v-drains, berms to direct water, raised platform and pumping water from collection points into water carts. However, water damming (Appendix B: Figures 3, 4 & 11) and erosion was observed at various areas on the site.
	Erosion within the construction site must be minimised through the following: - Limiting the area of disturbance and vegetation clearing to as small an area as possible. - Phasing vegetation clearing activities and limiting the time that any one area of bare soil is exposed to erosion. - Control of stormwater flowing onto and through the site. Where required, stormwater from upslope should be diverted around the construction site. - Prompt stabilisation and re-vegetation of soils after disturbance and construction activities in an area are complete	NC	Storm water management measures are being implemented as per the <i>Construction Storm water Management Plan</i> which includes graded v-drains, berms to direct water, raised platform and pumping water from collection points into water carts. However, water damming (Appendix B: Figures 3, 4 & 11) and erosion was observed at various areas on the site.
	All disturbed areas outside the direct development footprints will be rehabilitated and re-vegetated as soon as possible.	N/A	Condition does not apply to the current activities at Zibulo North Shaft Project as construction is still underway.
	The construction servitudes of the decline shaft will be regularly inspected for waste or littering and clean-up operations initiated if required.	C	The appointed ECO conducts inspections twice a week. No littering was observed on site at the time of the site assessment.
	No loss of wetland habitat will be permitted outside the authorised areas.	C	No evidence of non-compliance was observed during the site assessment.
	Demarcate recommended buffer (30m buffer) over the mining plan.	NC	The ECO was not able to confirm if the buffer demarcation was in place. In addition, no documented proof was provided.
	Landscape and re-vegetate all unnecessarily denuded areas as soon as possible.	N/A	Condition does not apply to the current activities at Zibulo North Shaft Project as construction is still underway.
	A detailed procedure for the handling, storage and disposal of waste must be developed and fully implemented during construction.	NC	Thungela has in place the <i>Zibulo Colliery Waste Management Procedure Version 9 updated on 14 November 2023</i>, however, the procedure is not adapted to reflect the current practices at Zibulo North Shaft Project.

		Fire management plan must: Be developed for wetlands located on Zibulo/Anglo owned land. The recommendations of the SANBI (2014) guidelines must be considered during the compilation of such a plan and adapted according to site specific conditions.	NC	No Fire Management plan has been developed for the Wetlands located on Zibulo owned land that includes SANBI (2014) guideline recommendations.
Visual impacts on the surrounding properties, communities and road users from the construction site may result. These impacts may result from excessive clearing and stripping of topsoil for preparing the area for the development, relatively random and disorganised lay down of building materials, vehicles and offices, extent and intensity of the security and construction lighting at night, dust from construction activities and un-rehabilitated landscape scarring.	Aesthetics	A perimeter berm will be constructed around the decline shaft to shield the cuts away from the affected structures.	N/A	Condition does not apply to the current activities at Zibulo North Shaft Project as construction is still underway.
		Where possible areas disturbed by construction activity, will be suitably topsoiled and vegetated as soon as is possible. The progressive rehabilitation measures will allow for the maximum growth period before the completion of the project.	N/A	Condition does not apply to the current activities at Zibulo North Shaft Project as construction is still underway.
		Limit areas of disturbance to areas where the decline shaft will be constructed or placed.	C	Construction activities / areas of disturbance are limited to the approved development footprint where the decline shaft will be constructed.
		Dust suppression will be undertaken at all areas that will be affected by construction activities and where dust will be generated.	C	Dust control measures such as dust suppression using a water truck (Appendix B: Figure 5), enforcing speed limits of 40km on site and keeping construction vehicles and equipment in good repair are implemented on site.
		Avoid upwards lighting of structures but rather direct the light downwards to focus on the object to be illuminated.	C	No evidence of non-compliance was observed during the site assessment.
		As night lighting during construction is one of the more objectionable forms of visual impact, it is important that selective and sensitive location and design of the lighting requirements for the construction camp and the mine are developed.	C	No evidence of non-compliance was observed during the site assessment.
Animal burrows and habitats remaining within the proposed area will be destroyed during construction. This may result in the migration of remaining animal life away from the affected areas.	Animal Life	The rehabilitation of the disturbed areas will be conducted such that the rehabilitated areas will encourage the migration of animals back into the rehabilitated areas.	N/A	Condition does not apply to the current activities at Zibulo North Shaft Project as construction is still underway.
Activity 24 of Listing Notice 1: Construction of the access, internal and service roads. Activity 12 and 19 of Listing Notice 1 and Activity 12 and 14 of Listing Notice 3: The construction of the main access road, load out station access road and the conveyor belt service road. Activity 6, 15 and 17 of Listing Notice 2: The development of the access, internal and service roads will result in the clearance of indigenous vegetation and will require a need for a WUL.				
The construction phase for the roads will lead to erosion of soil resources due to altered surface dynamics, the presence of hardened surfaces and general degradation	Soils, capability land use	The entire area will be monitored regularly for erosion as part of the road maintenance procedure.	C	The appointed ECO conducts inspections twice a week and monitors erosion as part of the road maintenance procedure.
		In cases where erosion does occur, action plans should be implemented to apply mitigation.	NC	Erosion was observed at various areas on the site as well as at the main access road (Appendix B: Figure 2), however, no action plans are implemented to apply mitigation.

of soil resources, which could result in the loss of land capability.				
		The construction of the roads will be undertaken within the approved footprint area.	C	The construction of service and access roads is limited to the approved footprint area.
		Excess soils will be stockpiled at the topsoil stockpiling area, which will not be more than five meters high.	NC	The <i>Zibulo Decline survey report dated 20 October 2023</i> depicts that there are areas on the topsoil stockpile that exceed the five meters height restriction.
The construction of the roads will result in the change of the current land surface, which will result in the change in the local drainage patterns.	Topography	The construction activities will be undertaken within the approved footprint areas.	C	Construction activities are limited to the approved development footprint.
Areas that have been stripped of vegetation will be prone to erosion. This could lead to increased siltation being deposited into the local streams. During the construction of the roads, surface water runoff from such areas will be contaminated with suspended solids, which can add to the turbidity in the nearby streams. This may have detrimental impact on the livelihood of the affected streams. If the construction vehicles are poorly maintained oil spills could cause pollution if washed off roads by stormwater.	Surface Water	Minimise the extent of hardened surfaces, to retain surface runoff in stilling ponds or retention facilities and to release these in a controlled manner including energy dissipation to avoid erosion to the receiving wetland areas.	C	Construction work is undertaken as per the project schedule and hardened surfaces are minimised.
		No loss of wetland habitat will be permitted outside the authorised areas.	C	No evidence of non-compliance was observed during the site assessment.
		All construction vehicles will be well maintained and inspected for hydrocarbon leaks according to the maintenance schedule.	C	Mine vehicles and machinery are maintained regularly and inspection records were verified by the auditors. Further to that the mine implements the <i>Zibulo North Shaft TMM COP Requirements</i> Procedure on site. Pre-use checklists are undertaken prior to construction vehicle use.
		Construction of the roads will be limited to designated boundaries and according to the approved method statement and civil design reports and drawings.	C	Construction of roads is limited to approved footprints and in accordance to the approved method statement and civil designs. The construction thereof is overseen by an ECSA certified Engineer (<i>ZNSEX-CED_LET-Z01-0009_0 – Confirmation of Employment of Professional Engineer & ECSA Certificate</i>).
		Areas that are stripped will be optimised to limit unnecessary stripping.	C	Soil stripping is conducted in a phased approach and only occurs prior to the commencement of construction in a particular area.
		Storm water from upslope of the stripped areas will be diverted around these areas to limit the amount of storm water flowing over from these areas.	NC	The permanent storm water infrastructure is yet to be constructed and temporary storm water management measures are being implemented as per the Construction Storm water Management Plan which includes graded v-drains, berms to direct water, raised platform and pumping water from collection points into water carts. However, water damming (Appendix B: Figures 3, 4 & 11) and erosion was observed at various areas on the site as well as at the main access road (Appendix B: Figure 2).
Disturbance brought about by construction activities of the roads, specifically the clearing of vegetation will provide opportunity for alien and pioneer species to establish and replace indigenous grassland/wetland species. During the construction phase, as activities are taking place adjacent to wetlands, there is a possibility that water quality can be impaired through contaminated surface runoff entering the wetlands.	Sensitive Landscape	All disturbance footprints will be separated from adjacent wetlands by a fence, either a security fence or as minimum a five-strand cattle fence (ideally not utilising barbed wire). The purpose of the fence is to clearly demarcate sensitive areas and prevent accidental vehicle and construction machinery access to these areas.	C	A security fence has been erected around the site (Appendix B: Figure 12).
		All construction staff will be educated on the sensitivity of wetland areas and should be made aware of all wetland areas in close proximity to the construction sites.	C	Zibulo North indicated that staff was educated on the sensitivity of wetlands areas through the Toolbox Talk conducted by the ECO (<i>41104759 ZNS Environmental Training material final</i>).

		Develop and implement a construction storm water management plan prior to the commencement of site clearing activities. Such a plan will aim to minimise the transport of sediment off site.	NC Storm water management measures are being implemented as per the <i>Construction Storm water Management Plan</i> which includes graded v-drains, berms to direct water, raised platform and pumping water from collection points into water carts. However, water damming (Appendix B: Figures 3, 4 & 11) and erosion was observed at various areas on the site as well as at the main access road (Appendix B: Figure 2).
		Erosion within the construction site will be minimised through the following: - Limiting the area of disturbance and vegetation clearing to as small an area as possible. - Phasing vegetation clearing activities and limiting the time that any one area of bare soil is exposed to erosion. - Control of stormwater flowing onto and through the site. Where required, stormwater from upslope will be diverted around the construction site. - Prompt stabilisation and re-vegetation of soils after disturbance and construction activities in an area are complete.	NC Storm water management measures are being implemented as per the <i>Construction Storm water Management Plan</i> which includes graded v-drains, berms to direct water, raised platform and pumping water from collection points into water carts. However, water damming (Appendix B: Figures 3, 4 & 11) and erosion was observed at various areas on the site as well as at the main access road (Appendix B: Figure 2).
		All disturbed areas outside the direct development footprints will be rehabilitated and re-vegetated as soon as possible.	N/A Condition does not apply to the current activities at Zibulo North Shaft Project as construction is still underway.
		Regular monitoring and inspections at rehabilitated sites will be undertaken to ensure successful rehabilitation.	N/A Condition does not apply to the current activities at Zibulo North Shaft Project as construction is still underway.
		The construction servitudes of the roads will be regularly inspected for waste or littering and clean-up operations initiated if required.	C The appointed ECO conducts inspections twice a week. No littering was observed on site at the time of the site assessment.
		No loss of wetland habitat will be permitted outside the authorised areas.	C No evidence of non-compliance was observed during the site assessment.
		Install/construct the construction stormwater management system prior to the onset of vegetation clearing activities on the surface infrastructure footprints.	NC Storm water management measures are being implemented as per the <i>Construction Storm water Management Plan</i> which includes graded v-drains, berms to direct water, raised platform and pumping water from collection points into water carts. However, water damming (Appendix B: Figures 3, 4 & 11) and erosion was observed at various areas on the site as well as at the main access road (Appendix B: Figure 2).
		Landscape and re-vegetate all unnecessarily denuded areas as soon as possible.	N/A Condition does not apply to the current activities at Zibulo North Shaft Project as construction is still underway.
		A detailed procedure for the handling, storage and disposal of waste will be developed and fully implemented during construction.	NC Thungela has in place the <i>Zibulo Colliery Waste Management Procedure Version 9 updated on 14 November 2023</i> , however, current practices at Zibulo North Shaft Project are not aligned with the detailed procedure .
		Fire management plan will be developed for wetlands located on Zibulo/Anglo owned land. The recommendations of the SANBI (2014)	NC No Fire Management plan has been developed for the Wetlands located on Zibulo owned land that includes SANBI (2014) guideline recommendations.

		guidelines should be considered during the compilation of such a plan and adapted according to site specific conditions.		
Noise generated from construction activities may add to the current noise levels. This may have impacts on surrounding property owners and occupiers.	Noise	Construction crew will conduct toolbox talks to educate their employees and ensure that they are aware of the legislation regarding noise.	C	Zibulo North indicated that noise management training was provided to employee and contractors through Toolbox Talk conducted by the ECO (41104759 ZNS Environmental Training material final).
		The construction companies will be wary of noise levels is working near receptors R4 – R8 and due to construction of the roads.	C	Zibulo North indicated that noise management training was provided to employee and contractors through Toolbox Talk conducted by the ECO (41104759 ZNS Environmental Training material final).
		The Environmental Co-ordinator will continuous communication with receptors R1 – R8 regarding noises and potential loud noise events.	C	There is currently a complaint register available to record contentions from affected parties (Zibulo North Shaft Complaint Form). Zibulo North Colliery indicated that a Community Liaison Officer has been appointed to engage directly with the public relating to the project.
		A contact line will be made available to receptors should a valid noise complaint arise whereby receptors could lodge a complaint (and documented). Should a valid noise complaint be lodged, it is advised that the Environmental co-ordinator contact an acoustical consultant with experience in noise monitoring to evaluate the complaint.	C	No complaint was received from the public during the audit period. There is currently a complaint register available to record contentions from affected parties (Zibulo North Shaft Complaint Form). Zibulo North Colliery indicated that a Community Liaison Officer has been appointed to engage directly with the public relating to the project.
		Onsite noise measurements will be considered on a frequent basis, to help identify any fault or loud equipment that may require enclosures or maintenance. It will be conducted at a frequency determined by the project team or environmental coordinator.	NC	The Environmental Noise Impact Assessment for Zibulo North shaft project, Njkangala District Municipality, Mpumalanga Province dated November 2020 recommended for inclusion in Authorisation that an Environmental Noise Monitoring Programme be implemented by an independent acoustical consultant. However, no Environmental Noise Monitoring Programme has been established.
		Annual noise measurements will be conducted at receptor R2 – R8. The Environmental measurements should be conducted at I&AP's i.e. farmsteads, receptors, communities.	NC	The Environmental Noise Impact Assessment for Zibulo North shaft project, Njkangala District Municipality, Mpumalanga Province dated November 2020 recommended for inclusion in Authorisation that an Environmental Noise Monitoring Programme be implemented by an independent acoustical consultant. However, no Environmental Noise Monitoring Programme has been established.
The mine personnel and the public will experience traffic impacts from the movement of vehicles around and within the mining area during the construction of the roads.	Traffic	The D686 be surfaced from 100m south of the southern access position, up to the existing surfacing to the north.	N/A	Condition does not apply to the current activities at Zibulo North Shaft Project as the surfacing of the D686 is yet to commence.
		With regard to non-motorised and public transport, a taxi and bus Pick-up and Drop-off zone is proposed on site for the use of employees.	C	It was noted during the time of the site assessment that public transport is utilised on site for use of employees.

		A Speed limit of 60km/h will be enforced, and the proposed Speed Limit Signs are to be erected on both sides of the access positions on the D686 within 200m of the proposed access road positions.	NC	A speed restriction of 40km/h is enforced on the site, however, no speed limit signage has been erected on the D686.
		The proposed “Heavy Vehicles” Turning Signs will be erected on both sides of the access positions on the D686 at least 100m from the proposed access road positions.	NC	No “Heavy Vehicles” Turning Signs have been erected on the D686.
		U-turn space will be provided on the site to avoid dangerous movements within the site.	C	No evidence of non-compliance was observed at the time of the site assessment.
		A minimum stacking space of 225m (space for nine trucks) will be provided at the proposed accesses in front of any gate or boom, to avoid queueing onto the road and disrupting the traffic.	C	No evidence of non-compliance was observed at the time of the site assessment.
		Surfacing of the D686 well as the access roads will reduce the dust and increase visibility for vehicles both on the D686 and vehicles exiting the site.	N/A	Condition does not apply to the current activities at Zibulo North Shaft Project as the surfacing of the D686 is yet to commence.
Visual impacts on the surrounding communities and road users from the construction site may result.	Aesthetics	Where possible, areas disturbed by construction activities, will be suitably topsoiled and vegetated as soon as is possible. The progressive rehabilitation measures will allow for the maximum growth period before the completion of the project.	N/A	Condition does not apply to the current activities at Zibulo North Shaft Project as construction is still underway.
		Limit areas of disturbance to areas where the roads will be constructed.	C	Construction activities / areas of disturbance are limited to the approved development footprint where the roads will be constructed.
		Dust suppression will be undertaken at all areas that will be affected by construction activities and where dust will be generated.	C	Dust control measures such as dust suppression using a water truck (Appendix B: Figure 5), enforcing speed limits of 40km on site and keeping construction vehicles and equipment in good repair are implemented on site.
		Avoid upwards lighting of structures but rather direct the light downwards to focus on the object to be illuminated.	C	No evidence of non-compliance was observed during the site assessment.
		As night lighting during construction is one of the more objectionable forms of visual impact, it is important that selective and sensitive location and design of the lighting requirements for the construction camp and the mine are developed.	C	No evidence of non-compliance was observed during the site assessment.
Activity 6, 15 and 17 of Listing Notice 1: Construction of Surface Infrastructure connected to the proposed Zibulo North Shaft Complex area (Offices/ workshops and related buildings, Contractor’s site, Sewage Treatment Facility, Load-out Station, Eskom Substation, Clean and Contaminated Overburden Stockpiles, Potable Water Storage Facility, Waste Storage Facility, Ventilation Shaft, Stone Dust Silo, Coal Storage area and Water management structures (PCD, sumps and diversion structures).				
Activity 10 and 11 under category B: The establishment and the construction of the temporary contaminated overburden material.				
Activity 10 under category B: The construction of the PCD and the STP.				

The construction phase for the above-mentioned infrastructure will lead to compaction and erosion of soil resources due to altered surface dynamics, the presence of hardened surfaces and general degradation of soil resources, which could result in the loss of land capability. Although the land to be occupied by the intended infrastructure will be relatively limited in area, the temporary impacts during will be significant due to the agricultural potential of the land. Although the natural susceptibility of the apedal sandy clay loam soils to water erosion is relatively low, erosion susceptibility increases appreciably with disturbance and denudation. During the construction phase, when surfaces become compacted and temporarily devoid of vegetation, soil erosion by runoff water can be expected. During the construction phase, severe soil compaction can be expected in and around construction areas, as all apedal loamy terrestrial soils are rated as highly susceptible to compaction. It is likely that the microbiological properties of the soil underneath the large impervious surfaces to be constructed will be negatively affected by lack of oxygen and lack of replenishment of organic matter. Changes in microbial communities may also result from acidification of the soil.	Soils, land capability and land use	The entire area will be monitored regularly for erosion as part of the road maintenance procedure.	C	The appointed ECO conducts inspections twice a week and monitors erosion as part of the road maintenance procedure.
		In cases where erosion does occur, action plans should be implemented to apply mitigation.	NC	Erosion was observed at various areas on the site as well as at the main access road (Appendix B: Figure 2), however, no action plans are implemented to apply mitigation.
		The construction activities will be conducted within the approved footprint area.	C	The construction activities are limited to the approved footprint area.
		Excess soils will be stockpiled at the topsoil stockpiling area, which will not be more than five meters high.	NC	The <i>Zibulo Decline survey report dated 20 October 2023</i> depicts that there are areas on the topsoil stockpile that exceed the five meters height restriction.
		The stockpiled topsoil will be seeded with a recommended seed mix to ensure that a good vegetation cover is achieved, should the natural seedbank not provide sufficient cover.	N/A	Condition does not apply to the current activities of the Zibulo North Shaft Project as the topsoil stockpiling is underway.
		No mixing of the topsoil material with subsoil, softs and hard overburden material will be allowed.	NC	Mixing of the topsoil with softs was observed at the designated stockpile area ((Appendix B: Figure 15).
The construction of the above- mentioned infrastructures will result in the change of the current land surface, which will result in the change in the local drainage patterns.	Topography	The construction activities of the above- mentioned infrastructure will be undertaken within the approved footprint areas.	C	Construction activities are limited to the approved development footprint.
During the construction of the surface infrastructure for the proposed project, topsoil will be stripped and civil works will be undertaken as part of the preparation of the area for the construction of infrastructure. These activities may result in bare areas, which will result in the erosion of soils during rainfall events, with elevated suspended solids reporting in the runoff water, which may ultimately enter the nearby watercourses. This may subsequently also result in erosion gullies along the runoff patterns, which will result in offsite impacts such as increased sedimentation of the receiving water environments.	Surface Water	Minimise the extent of hardened surfaces, to retain surface runoff in stilling ponds or retention facilities and to release these in a controlled manner including energy dissipation to avoid erosion to the receiving wetland areas.	C	Construction work is undertaken as per the project schedule and hardened surfaces are minimised.
		Install/construct the construction stormwater management system prior to the onset of vegetation clearing activities on the surface infrastructure footprints.	NC	Storm water management measures are being implemented as per the <i>Construction Storm water Management Plan</i> which includes graded v-drains, berms to direct water, raised platform and pumping water from collection points into water carts. However, water damming (Appendix B: Figures 3, 4 & 11) and erosion was observed at various areas on the site.

	No mining activities will be allowed outside of the authorised areas.	C	The boxcut construction is limited to authorised areas.
	Ensure that no equipment is washed in the streams and washing will be undertaken at the mine's workshop area.	C	No equipment washing was undertaken on site during the audit period as the wash bay is yet to be constructed.
	All construction vehicles will be well maintained and inspected regularly for hydrocarbon leaks.	C	Mine vehicles and machinery are maintained regularly and inspection records were verified by the auditors. Further to that Anglo implements the <i>Zibulo North Shaft TMM COP Requirements</i> Procedure on site. Pre-use checklists are undertaken prior to construction vehicle use.
	Construction of the infrastructures will be limited to designated boundaries and according to designs.	C	The construction of the infrastructures is limited to the approved footprint area and according to approved designs.
	In order to reduce the potential impacts associated with the introduction of contaminants dissolved or suspended in the runoff from construction sites, where practically possible, no runoff will be introduced into wetlands.	C	No evidence of non-compliance was observed at the time of the site assessment.
	All construction must be undertaken in line with the approved method statement and civil design reports and drawings.	C	All construction activities is undertaken in line with the approved method statement and civil designs. The construction thereof is overseen by an ECSA certified Engineer (<i>ZNSEX-CED_LET-Z01-0009_0 – Confirmation of Employment of Professional Engineer & ECSA Certificate</i>).
	Areas that are stripped will be optimised to limit unnecessary stripping.	C	Soil stripping is conducted in a phased approach and only occurs prior to the commencement of construction in a particular area.
	Storm water from upslope of the stripped areas will be diverted around these areas to limit the amount of storm water flowing over from these areas.	NC	The permanent storm water infrastructure is yet to be constructed and temporary storm water management measures are being implemented as per the Construction Storm water Management Plan which includes graded v-drains, berms to direct water, raised platform and pumping water from collection points into water carts. However, water damming (Appendix B: Figures 3, 4 & 11) and erosion was observed at various areas on the site.
	Design and implement a construction storm water management plan.	NC	Storm water management measures are being implemented as per the <i>Construction Storm water Management Plan</i> which includes graded v-drains, berms to direct water, raised platform and pumping water from collection points into water carts. However, water damming (Appendix B: Figures 3, 4 & 11) and erosion was observed at various areas on the site.
	Divert clean water around the cleared area and install erosion protection measures and energy dissipaters at points of discharge.	NC	Storm water management measures are being implemented as per the <i>Construction Storm water Management Plan</i> which includes graded v-drains, berms to direct water, raised platform and pumping water from collection points into water carts. However, water damming (Appendix B: Figures 3, 4 & 11) and erosion was observed at various areas on the site as well as at the main access road (Appendix B: Figure 2).
	Where practically possible, the major earthworks will be undertaken during the dry season (roughly from April to August) to limit erosion due to rainfall runoff.	C	Construction commenced on 05 May 2023 which afforded the opportunity for soil stripping and major earthwork activities to be concentrated in the dry season.

		Cleared areas outside direct development footprint will be re- vegetated and seeded (where necessary) as soon as possible following disturbance. Priority will be given to harvesting seeds from the surrounding grasslands for seeding purposes. In the absence of such seed being available, commercial seed mixes suitable for the area will be utilised and applied via hydro-seeding.	N/A	Condition does not apply to the current activities of the Zibulo North Shaft Project as construction is currently underway.
		Regular monitoring and inspections at rehabilitated sites will be undertaken to ensure successful rehabilitation.	N/A	Condition does not apply to the current activities at Zibulo North Shaft Project as construction is still underway.
Construction activities will involve the clearing of large areas of soil, as well as the movement of soil. This will expose large areas and large volumes of soil to erosion by wind and water, which will likely be aggravated by an increase in surface runoff from bare soil areas and concentration of flows. Sediment could be transported downslope via surface runoff to the adjacent wetland areas, leading to increased turbidity with resultant impacts on aquatic habitats, including loss of sensitive species, as well as increased sediment deposition in wetlands, leading to habitat degradation as these areas become colonised by alien and pioneer species. Severe sedimentation could also impact of flow distribution within the wetlands. During the construction phase, as activities are taking place adjacent to wetlands, there is a possibility that water quantity and quality can be impaired through contaminated surface runoff entering the wetlands. Typically, impairment will occur as a consequence of sediment disturbance resulting in an increase in turbidity. Water quality may also be impaired as a consequence of accidental spillages and the intentional washing and rinsing of equipment within the wetlands. It is possible that hydrocarbons will be temporarily stored and used on site, as well as cement and other potential pollutants	Sensitive Landscape	Implement storm water management plan.	NC	Storm water management measures are being implemented as per the <i>Construction Storm water Management Plan</i> which includes graded v-drains, berms to direct water, raised platform and pumping water from collection points into water carts. However, water damming (Appendix B: Figures 3, 4 & 11) and erosion was observed at various areas on the site as well as at the main access road (Appendix B: Figure 2).
		Reduce the extent of bare surfaces wherever possible by rehabilitating and revegetating them.	C	Soil stripping is conducted in a phased approach and only occurs prior to the commencement of construction in a particular area.
		Design of surface infrastructure areas will be optimised to minimise the size of the development footprint and to avoid encroachment into wetland habitat.	C	Construction activities are limited to the approved development footprint.
		Emergency servicing of construction vehicles will take place only in dedicated areas.	C	Drip trays are utilised for emergency servicing to minimise the potential for soil contamination.

Disturbance brought about by construction activities, specifically the clearing of vegetation will provide opportunity for alien and pioneer species to establish and replace indigenous grassland/wetland species.		All disturbance footprints will be separated from adjacent wetlands by a fence, either a security fence or as minimum a five-strand cattle fence (ideally not utilising barbed wire). The purpose of the fence is to clearly demarcate the infrastructural areas from the wetland areas and prevent accidental vehicle and construction machinery access to these areas.	C	All the temporary stockpiles, constructor's camps, laydown areas, ablution facilities are located within the fenced off shaft footprint area (Appendix B: Figure 12). This serves to separate the abovementioned disturbance footprints from the adjacent wetlands.
		Locate all temporary stockpiles, constructor's camps, laydown areas, ablution facilities etc. within the fenced off shaft footprint area.	C	All the temporary stockpiles, constructor's camps, laydown areas, ablution facilities are located within the fenced off shaft footprint area (Appendix B: Figure 12).
		All construction staff will be educated on the sensitivity of wetland areas and will be made aware of all wetland areas in close proximity to the construction sites.	C	Zibulo South indicated that staff was educated on the sensitivity of wetlands areas through the Toolbox Talk conducted by the ECO (41104759 ZNS Environmental Training material final).
		Develop and implement a construction stormwater management plan prior to the commencement of site clearing activities. Such a plan will aim to minimise the transport of sediment off site.	NC	Storm water management measures are being implemented as per the <i>Construction Storm water Management Plan</i> which includes graded v-drains, berms to direct water, raised platform and pumping water from collection points into water carts. However, water damming (Appendix B: Figures 3, 4 & 11) and erosion was observed at various areas on the site as well as at the main access road (Appendix B: Figure 2).
		Erosion within the construction site must be minimised through the following: - Limiting the area of disturbance and vegetation clearing to as small an area as possible; - Phasing vegetation clearing activities and limiting the time that any one area of bare soil is exposed to erosion; - Control of stormwater flowing onto and through the site. Where required, stormwater from upslope will be diverted around the construction site; - Prompt stabilisation and re-vegetation of soils after disturbance and construction activities in an area are complete.	NC	Storm water management measures are being implemented as per the <i>Construction Storm water Management Plan</i> which includes graded v-drains, berms to direct water, raised platform and pumping water from collection points into water carts. However, water damming (Appendix B: Figures 3, 4 & 11) and erosion was observed at various areas on the site as well as at the main access road (Appendix B: Figure 2).
		All disturbed areas outside the direct development footprints will be rehabilitated and re-vegetated as soon as possible.	N/A	Condition does not apply to the current activities at Zibulo North Shaft Project as construction is still underway.
		The construction servitudes will be regularly inspected for waste or littering and clean-up operations initiated if required.	C	The appointed ECO conducts inspections twice a week. No littering was observed on site at the time of the site assessment.
		No loss of wetland habitat will be permitted outside of the authorised areas.	C	No evidence of non-compliance was observed during the site assessment. The mine is currently in the construction phase, and this commenced May 2023.
During the construction of the above-mentioned surface infrastructure, hydrocarbon fluids (diesel, petrol and oils) and other chemicals may spill onto the ground resulting in	Groundwater	Used oil will be removed immediately after vehicle servicing.	C	No evidence of non-compliance was observed during the site assessment. There is currently no workshops for machinery and vehicles.
		All material with potential to pollute will be stored in secure facilities.	C	All materials with potential to pollute are stored in a secure and bunded storage cage (Appendix B: Figure 20).

the potential pollution of surface and groundwater environments. limited lowering of the water table may be evident adjacent to the shaft.		Waste such as sewage will be treated at site according to accepted standards.	NC	Chemical toilets are used on site (Appendix B: Figure 10) and are cleaned and serviced by Tallisman, however, Tallisman disposal records were not provided for verification.
		Mine machinery will be repaired at designated areas fit for purpose. No maintenance outside the dedicated areas will be allowed unless it is an emergency repairs which must be on a protected ground or by use of drip trays.	NC	A concrete vehicle maintenance slab has been constructed on site (Appendix B: Figure 19), however, the area is prone to water damming which may lead to soil contamination of adjacent areas and/or seepage from the contaminated storm water.
		All hydrocarbon liquids will be stored in leak and corrosion resistant containers. These containers will be placed in bunded areas. The containers used for the storage of hydrocarbon liquids will be maintained in good condition.	C	Hydrocarbon liquids are stored in a leak and corrosion resistant bunded storage cage (Appendix B: Figure 20). The storage container was observed to be in good condition,
		All spillages will be contained and the affected areas remedied. An emergency preparedness plan, which will be in line with the mine's environmental emergency plan and the norms and standards for the waste storage facilities will be used. Where necessary, sufficient supply of absorbent fibre will be kept at site to contain accidental spills.	C	The spillages that were recorded on the <i>Incident Register update 2023</i> were remedied. No spillages were observed at the time of the site assessment. Zibulo North implements a Procedure for Environmental Related Emergencies and Remediation which is included in Section 6 of the approved Final EIR and EMP. Further to that Anglo implements a <i>Thungela Zibulo North Shaft Emergency Preparedness Plan</i> that includes an Emergency hazardous materials and spill response contact number. Spill kits were observed on site to handle hydrocarbon spills should they occur (Appendix B: Figure 10).
		Training for the waste storage facilities will be conducted for employees working with waste (hydrocarbon liquid), including contractors' employees.	C	Zibulo North indicated that waste management training was provided to employee and contractors through Toolbox Talk conducted by the ECO (41104759 ZNS <i>Environmental Training material final</i>).
		Credible waste collectors will be used for the removal of waste from the site to a registered waste disposal facility.	NC	Although general waste is disposed of at a permitted landfill site by Enviroserv who have been appointed to manage general waste and construction rubble (<i>Proof of site delivery Manifest, Enviroserv Certificates</i>), no records of hazardous waste disposal and Tallisman chemical toilet waste disposal was provided to the auditor.
Noise generated from construction activities may add to the current noise levels. This may have impacts on surrounding property owners and occupiers.	Noise	Construction crew will conduct toolbox talks to educate their employees and ensure that they are aware of the legislation regarding noise.	C	Zibulo North indicated that noise management training was provided to employee and contractors through Toolbox Talk conducted by the ECO (41104759 ZNS <i>Environmental Training material final</i>).
		The construction companies will be wary of noise levels is working near receptors R4 – R8 and due to construction activities.	C	Zibulo North indicated that noise management training was provided to employee and contractors through Toolbox Talk conducted by the ECO (41104759 ZNS <i>Environmental Training material final</i>).
		The Environmental Co-ordinator will keep continuous communication with receptors R1 – R8 regarding noises and potential loud noise events.	C	There is currently a complaint register available to record contentions from affected parties (<i>Zibulo North Shaft Complaint Form</i>). Zibulo North Colliery indicated that a Community Liaison Officer has been appointed to engage directly with the public relating to the project.
		A contact line will be made available to receptors should a valid noise complaint arise whereby receptors could lodge a complaint (and	C	No complaint was received from the public during the audit period. There is currently a complaint register available to record contentions from affected parties (<i>Zibulo North</i>

		documented). Should a valid noise complaint be lodged, the Environmental co-ordinator contact an acoustical consultant with experience in noise monitoring to evaluate the complaint.		Shaft Complaint Form). Zibulo North Colliery indicated that a Community Liaison Officer has been appointed to engage directly with the public relating to the project.
		Onsite noise measurements will be considered on a frequent basis, to help identify any fault or loud equipment that may require enclosures or maintenance. It should be conducted at a frequency determined by the project team or environmental coordinator.	NC	The Environmental Noise Impact Assessment for Zibulo North shaft project, Njkangala District Municipality, Mpumalanga Province dated November 2020 recommended for inclusion in Authorisation that an Environmental Noise Monitoring Programme be implemented by an independent acoustical consultant. However, no Environmental Noise Monitoring Programme has been established.
		Annual noise measurements will be conducted at receptor R2 – R8. The Environmental measurements should be conducted at I&AP's i.e. farmsteads, receptors, communities.	NC	The Environmental Noise Impact Assessment for Zibulo North shaft project, Njkangala District Municipality, Mpumalanga Province dated November 2020 recommended for inclusion in Authorisation that an Environmental Noise Monitoring Programme be implemented by an independent acoustical consultant. However, no Environmental Noise Monitoring Programme has been established.
Combined Results of the Impact Assessment and Mitigation Measures: Activity, 12, 19 of Listing Notice 1, Activity 6, 15 and 17 of Listing Notice 2 and Activity 12 and 14 of Listing Notice 3: The excavation, removal and moving of soil and rock within a watercourse or within 32m thereof. These includes: section of the truck load-out access road, overland conveyor belt, overland conveyor belt service road, buried potable water pipeline and overhead powerline pylons. Activity 6, 15 and 17 of Listing Notice 1: Construction of Surface Infrastructure connected to the proposed Zibulo North Shaft Complex area (Offices/ workshops and related buildings, Contractor's site, Sewage Treatment Facility, Load-out Station, Eskom Substation, Clean and Contaminated Overburden Stockpiles, Potable Water Storage Facility, Waste Storage Facility, Ventilation Shaft, Stone Dust Silo, Coal Storage area, internal and external roads and Water management structures (PCD, sumps and diversion structures). Activity 10 and 11 under Category B: The establishment and the construction of the temporary contaminated overburden material. Activity 10 under Category B: The construction of the PCD and the STP. Activity 34 of Listing Notice 1 and Activity 15 of Listing Notice 2: The extension of the underground mine workings will result in the need for a water use licence in accordance with section 21 (c) and 21(i) of the National Water Act, 1998 (Act No. 36 of 1998) (NWA). Establishment of the Initial Box cut.				
The development of the Zibulo North Shaft Project may result in the disturbance of heritage sites. It is also possible that one site close to the shaft complex may be affected by the construction activities if areas not be managed according to the recommendations by the Heritage Specialist.	Sites of archaeological and cultural importance.	Fence all graveyards in and have a grave management plan drafted for the sustainable preservation thereof. These include graveyards no 2 (within 1 km from the overland conveyor belt) and no 3 (within 1 km from the ventilation shaft). The grave management plan will be written by a heritage expert. This usually is done when the graves are in no danger of being damaged, but where there will be a secondary impact due to the activities of the mine.	NC	No grave management plan was drafted for the sustainable preservation of the graveyards. It should be noted that the auditors did not visit the graveyard area and thus cannot assess whether all the graveyards have been fenced off.
		Upon finding any archaeological or historical material, all work at the affected area must cease. The area will be demarcated in order to prevent any further work there until an investigation has been completed. An archaeologist will be contacted immediately to provide advice on the matter. Should it be a minor issue, the archaeologist will decide on future action, which could include adapting the HIA or not. Depending on the nature of the find, it may include a site visit.	N/A	The condition has been noted by Zibulo North.

		If needed, the necessary permit will be applied for with SAHRA. This will be done in conjunction with the appointed archaeologist. The removal of such archaeological material will be done by the archaeologist in lieu of the approval given by SAHRA, including any conditions stipulated by the latter. Work on site will only continue after removal of the archaeological/ historical material was done.		
		Access will be provided to the families of the grave sites identified within the project area. Regulated visitor hours will be implemented that is compatible with mine safety rules.	N/A	The condition has been noted by Zibulo North.
		The families of the grave sites identified within the project area currently have access to these areas. Should alternatives to access the cultural heritage sites be identified during commencement of the project, the families will be notified.	N/A	The condition has been noted by Zibulo North.
Traffic impacts may result from the movement of vehicles around and within the shaft area.	Traffic Impact	A Speed limit of 60km/h will be enforced, and the proposed speed limit signs are to be erected.	C	A speed restriction of 40km/h is enforced as was observed on the site.
		Traffic will be restricted to demarcated areas and traffic volumes and speeds within the shaft complex construction site will be controlled.	C	Traffic is restricted to demarcated areas and a speed restriction of 40km/h is enforced as was observed on the site.
The proposed Zibulo North Shaft Project falls within the Vryheid Formation, of which the palaeontological sensitivity is very high. No palaeontological sensitivity areas were identified during the field assessment. However, palaeontological sensitivity areas may be exposed during clearing, digging, excavating, drilling or blasting which may permanently have an impact on the palaeontological sensitivity areas.	Palaeontology	If any palaeontological material is exposed during clearing, digging, excavating, drilling or blasting SAHRA must be notified. All construction activities must be stopped, a 30 m no-go barrier constructed and a palaeontologist should be called in to determine proper mitigation measures.	N/A	The condition has been noted by Zibulo North.
		Should further fossil material be discovered during the course of the development (e. g. during bedrock excavations), this must be safeguarded, where feasible in situ, and reported to a palaeontologist or to the Heritage Resources authority. In situations where the area is considered palaeontological sensitive (e. g. Karoo Supergroup Formations, ancient marine deposits in the interior or along the coast) the palaeontologist might need to monitor all newly excavated bedrock. The developer needs to give the palaeontologist sufficient time to assess and document the finds and, if necessary, to rescue a representative sample.	N/A	The condition has been noted by Zibulo North.
		A Section 37(2) agreement of the Occupational, Health and Safety Act 85 of 1993 must be signed with the relevant contractors to protect the environment (fossils) and adjacent areas as well as for safety and security reasons.	C	Zibulo North indicated that a Section 37(2) agreement of the Occupational, Health and Safety Act 85 of 1993 has been signed with the contractors.

Noise generated from construction activities may add to the current noise levels. This may have impacts on surrounding property owners and occupiers.	Noise	Construction crew will conduct toolbox talks to educate their employees and ensure that they are aware of the legislation regarding noise.	C	Zibulo North indicated that noise management training was provided to employee and contractors through Toolbox Talk conducted by the ECO (41104759 ZNS Environmental Training material final).
		The construction companies will be wary of noise levels is working near receptors R4 – R8 and due to construction activities.	C	Zibulo North indicated that noise management training was provided to employee and contractors through Toolbox Talk conducted by the ECO (41104759 ZNS Environmental Training material final).
		The Environmental Co-ordinator will keep continuous communication with receptors R1 – R8 regarding noises and potential loud noise events.	C	There is currently a complaint register available to record contentions from affected parties (Zibulo North Shaft Complaint Form). Zibulo North Colliery indicated that a Community Liaison Officer has been appointed to engage directly with the public relating to the project.
		A contact line will be made available to receptors should a valid noise complaint arise whereby receptors could lodge a complaint (and documented). Should a valid noise complaint be lodged, it is advised that the Environmental co-ordinator contact an acoustical consultant with experience in noise monitoring to evaluate the complaint.	C	No complaint was received from the public during the audit period. There is currently a complaint register available to record contentions from affected parties (Zibulo North Shaft Complaint Form). Zibulo North Colliery indicated that a Community Liaison Officer has been appointed to engage directly with the public relating to the project.
		Onsite noise measurements will be considered on a frequent basis, to help identify any fault or loud equipment that may require enclosures or maintenance. It will be conducted at a frequency determined by the project team or environmental coordinator.	NC	The Environmental Noise Impact Assessment for Zibulo North shaft project, Njkangala District Municipality, Mpumalanga Province dated November 2020 recommended for inclusion in Authorisation that an Environmental Noise Monitoring Programme be implemented by an independent acoustical consultant. However, no Environmental Noise Monitoring Programme has been established.
		Quarterly noise measurements will be conducted at receptor R2 – R8. The Environmental measurements should be conducted at I&AP's i.e. farmsteads, receptors, communities.	NC	The Environmental Noise Impact Assessment for Zibulo North shaft project, Njkangala District Municipality, Mpumalanga Province dated November 2020 recommended for inclusion in Authorisation that an Environmental Noise Monitoring Programme be implemented by an independent acoustical consultant. However, no Environmental Noise Monitoring Programme has been established.
Visual impacts on the surrounding communities and road users from the construction site.	Aesthetics	Where possible areas disturbed by construction activity, will be suitably topsoiled and vegetated as soon as is possible. The progressive rehabilitation measures will allow for the maximum growth period before the completion of the project.	N/A	Condition does not apply to the current activities at Zibulo North Shaft Project as construction is still underway.
		Limit areas of disturbance to areas where the construction activities will be constructed or placed.	C	Construction activities / areas of disturbance are limited to the approved development footprint where the decline shaft will be constructed.
		Dust suppression will be undertaken at all areas that will be affected by construction activities and where dust will be generated.	C	Dust control measures such as dust suppression using a water truck (Appendix B: Figure 5), enforcing speed limits of 40km on site and keeping construction vehicles and equipment in good repair are implemented on site.
		Avoid upwards lighting of structures but rather direct the light downwards to focus on the object to be illuminated.	C	No evidence of non-compliance was observed during the site assessment.

		All areas affected by the construction works will need to be rehabilitated and re-vegetated.	N/A	Condition does not apply to the current activities at Zibulo North Shaft Project as construction is still underway.
		The special conditions of contract will include for the stripping and stockpiling of topsoil from the construction areas for later re-use.	C	Stripped topsoil from the construction activities is stockpiled at the designated topsoil stockpile area (Appendix B: Figure 15).
		All existing large trees (if any) that fall outside the earthworks area must be retained. These will assist in softening the forms of the structures and obscure views to them.	C	No removal of existing large trees occurred during the audit period.
Impact on employment.	Socio-economic aspects	The Zibulo social way encourages the mine personnel to form effective relationships with local stakeholders and gain a social license to operate.	C	Zibulo North indicated that the company promotes strong relationships with the communities that surrounds its operations through regular engagement on issues and impacts that may affect them (<i>Thungela Social and Labour Plan Zibulo Colliery (Oogiesfontein) MP 30/5/1/2/2/338 MR Application for Section 102 for Period: 2021 – 2025</i>).
		Local labour and contractors will be appointed. This will ensure that economic spin-offs that result due to employment, benefit the local community.	C	Zibulo North stated that local contractors have been appointed and that local labourers are employed as far as possible by the contractors.
Influx of job seekers.		The proportion of job opportunities allocated to the local population will be maximised.	C	Zibulo North indicated that local labourers are employed as far as possible on the Zibulo North Shaft Project.
		Ensure good communication between the operation and surface owners and farmers whose properties might be directly affected by the population influx.	C	Zibulo North ensures good communication between the operation and surface owners and farmers through interviews and focus groups. A Community Liaison Officer has been appointed to engage directly with the local community for the duration of the project.
		Zibulo Colliery will ensure that the creation of unrealistic expectations is prevented by communicating the period of the construction phase to the local communities and the communities will be informed that few new positions will be created. Local councillors will be involved in the above communication.	C	Zibulo North stated that a Community Liaison Officer has been appointed to engage directly with the local community for the duration of the project.
Skills Development and Skills Transfer.		Where possible skills development will focus on scarce skills.	C	Zibulo's skill development strategy aims to achieve the following: - Develop operational and technical skills and competencies for all employees. - Monitor and manage development plans for talented employees identified as having the potential to be promoted into more senior positions based on the development pipeline. - Provide opportunities for employees to further their careers through appropriate training and part-time studies. (<i>Thungela Social and Labour Plan Zibulo Colliery (Oogiesfontein) MP 30/5/1/2/2/338 MR Application for Section 102 for Period: 2021 – 2025</i>)
Multiplier effects on the local economy.		When appointing contractors especially for big jobs that local businesses cannot access, the mine will facilitate for the main contractors to subcontract a portion of the work to local SMMEs.	C	Zibulo North indicated that the main contractors on the Zibulo North Shaft Project have a contractual obligation to subcontract local SMMEs where possible.

		Where appropriate SMMEs do not exist, the mine will investigate the possibility of aligning the training/skills development. Zibulo Colliery has SMME development projects in their SLP, as far as possible the content and direction of these training programs will be linked to opportunities available in the mine.	N/A	The condition has been noted by Zibulo North.
		Zibulo Colliery will develop an electronic historically disadvantaged South Africans (HDSA) database of local businesses.	NC	An electronic historically disadvantaged South Africans database for local businesses is yet to be developed.
		The mine will establish linkages with other local businesses to enhance the impact of their SMME training. The mine will also establish income generating projects that will be managed by local SMMEs.	C	No evidence of non-compliance was observed during the audit period. Zibulo North continues to implement the <i>Thungela Social and Labour Plan Zibulo Colliery (Oogiesfontein) MP 30/5/1/2/2/338 MR Application for Section 102 for Period: 2021 – 2025</i>).
Increase in the Spread of Communicable Diseases and Social Pathologies Linked to the Influx of Workers.		Zibulo will continue implementing and enhancing their HIV/AIDS and health related programs for employees and community members.	C	Zibulo North continues to implement their HIV/AIDS and health related programs through awareness programs such as the “Be Well” initiative (<i>Thungela Social and Labour Plan Zibulo Colliery (Oogiesfontein) MP 30/5/1/2/2/338 MR Application for Section 102 for Period: 2021 – 2025</i>).
		Zibulo will ensure that the socio- economic realities are included in their worker induction programs and that workers understand the code of conduct of the organisation. This should also apply to contractors and sub-contractors.	C	Socio-economic issues are included as part of the Thungela employee induction program.
		Zibulo Colliery has established a communication strategy that encourages local stakeholders to communicate with the mine and has put in place monitoring and evaluation procedures to track the effectiveness of the engagement processes.	C	Zibulo North ensures good communication between the operation and surface owners and farmers through interviews and focus groups. A Community Liaison Officer has been appointed to engage directly with the local community for the duration of the project.
		Zibulo Colliery is in the process of establishing a verification committee that includes local councillors however opportunities created by digital technology will be considered in order to make the verification process more effective and efficient.	N/A	The condition is noted by Zibulo North.
Conflict between new-comers and the incumbent population.		Zibulo will follow recommended strategies to enhance local employment and procurement.	C	Zibulo North indicated that the main contractors on the Zibulo North Shaft Project have a contractual obligation to subcontract local SMMEs where possible.
		Zibulo will continue innovating ways to strengthen stakeholder engagement with the mine.	C	Zibulo North indicated that a Community Liaison Officer has been appointed to engage directly with the local community for the duration of the project.
		A stakeholder mapping exercise will be conducted before the project begins in order to determine if the change of location affects the prioritization of stakeholders and new affected parties that may have not been identified at the current active site.	NC	A stakeholder mapping exercise was not conducted prior to commencement of the Zibulo North Shaft Project.

Increased pressure on infrastructure and services.		Enhance local recruitment measures through skills development in order to limit as far as possible in migration.	C	Thungela plays a role in various economic development projects within the District and Local Municipalities which includes skills development projects such as the Ogies Light Industrial Park and the Multi-purpose Centre in Leandra/Lebohang (<i>Thungela Social and Labour Plan Zibulo Colliery (Oogiesfontein) MP 30/5/1/2/2/338 MR Application for Section 102 for Period: 2021 – 2025</i>).
		Liaise openly and frequently with stakeholders to ensure knowledge around the prioritisation of locality, this could assist as a measure to deter people from moving to the said areas for employment.	C	Zibulo North indicated that a Community Liaison Officer has been appointed to engage directly with the local community for the duration of the project.
		To work in partnership with government, industry, and relevant organisations to enhance the existing infrastructure and services.	C	Thungela plays a role in various economic development projects within the District and Local Municipalities which includes skills development projects such as the Ogies Light Industrial Park and the Multi-purpose Centre in Leandra/Lebohang (<i>Thungela Social and Labour Plan Zibulo Colliery (Oogiesfontein) MP 30/5/1/2/2/338 MR Application for Section 102 for Period: 2021 – 2025</i>).
		Enhance the grievance procedure that is easily accessible, culturally appropriate and scaled to the potential risks and impacts of the Project, through which complaints related to contractor or employee behaviour can be lodged and addressed.	C	There is currently a complaint register available to record contentions from affected parties (<i>Zibulo North Shaft Complaint Form</i>). Zibulo North Colliery indicated that a Community Liaison Officer has been appointed to engage directly with the public relating to the project.
Increased nuisance factors and changed sense of place.		Liaise frequently with affected stakeholders to ensure they have information about activities that will generate nuisance factors.	C	Zibulo North Colliery indicated that a Community Liaison Officer has been appointed to engage directly with the public relating to the project
		Implement grievance mechanisms effectively.	C	There is a complains register in place and an effective grievance mechanism.
The fact that most of the proposed infrastructure will be situated in crop production areas, already devoid of all-natural vegetation, must be taken into consideration. The remaining grassland areas within the Zibulo Colliery North Shaft area that will be negatively impacted by the placement of the overland conveyor belt, overland conveyor belt service road, buried potable water pipeline and overhead power line pylons areas are very small in relation to the total project area. The activities above will result in the following: Direct loss of grassland habitat, reduction in volume of water entering the grassland areas, increase in volume of water entering the grassland areas, alteration in drainage flow pattern through grassland areas, increased soil sediment loads via surface water runoff, dust generation, transportation onto grassland plants, contamination of ground and surface water, increased incidence of erosion, increase in declared invader species, oil, lubricant, chemical spills, disturbance of flora and fauna species of concern.	Biodiversity	Construction will be conducted during the winter months, where possible in order to curb surface water containing silt, reporting to the grassland/wetland areas and to avoid disturbance of animal species breeding in the grassland/wetland areas.	C	Construction commenced on 05 May 2023 which afforded the opportunity for topsoil stripping activities to be concentrated in the dry season.
		Clearance of vegetation will be kept to the absolute minimum.	N/A	Condition could not be assessed as the wetland area could not be visited due to road access issues.
		No machinery will be serviced within the grassland/wetland areas.	C	Zibulo North indicated that staff was educated on the sensitivity of wetlands areas through the Toolbox Talk conducted by the ECO (<i>41104759 ZNS Environmental Training material final</i>).
		Chemical toilets must be provided on site and no employees may relieve themselves in the veld (wetland or terrestrial).	C	Chemical toilets are provided on site and used by employees (Appendix B: Figure 10).
		Domestic waste will be collected on site and must not end up in the veldt (wetland or terrestrial).	C	General waste skips have been placed on site and they are disposed of at a permitted landfill site by Enviroserve who have been appointed to manage general waste and construction rubble (<i>Proof of site delivery Manifest, Enviroserve Certificates</i>).
		Dust suppression will be conducted regularly in order to have the least amount of dust settling on grassland/wetland vegetation.	C	Dust suppression using a water truck is conducted on site (Appendix B: Figure 5).

Only small portion of the infrastructural area will disturb the ecosystem and result in the loss of biological diversity since the area will be stripped of all vegetation and topsoil. This negative impact cannot be avoided since this is the only area where the infrastructural area will have the least environmental impact since the area is already disturbed by historic mining related infrastructure.		Machinery will be kept in good working order to curb hydrocarbon leaks and spills that may contaminate the groundwater.	C	Mine vehicles and machinery are maintained regularly, and inspection records were verified by the auditors. Further to that Anglo implements the <i>Zibulo North Shaft TMM COP Requirements</i> Procedure on site.
		Emergency maintenance will be conducted on protected ground.	C	Drip trays are utilised for emergency servicing to minimise the potential for soil contamination.
		No snares may be set, no poaching of animals or plants may occur.	C	Zibulo North indicated that staff was educated on the sensitivity of wetlands areas through the Toolbox Talk conducted by the ECO (<i>41104759 ZNS Environmental Training material final</i>).
		The area will be fenced so that personnel working in this area cannot wander into the grassland/wetland areas and cause any disturbance.	C	All the temporary stockpiles, constructor's camps, laydown areas, ablution facilities are located within the fenced off shaft footprint area (Appendix B: Figure 12).
Movement of mine vehicles over exposed areas will result in the generation of dust. Generated dust will migrate towards the predominant wind direction and may settle on surrounding farm houses.	Air Quality	Baseline monitoring at these sites will commence at least one year prior to the onset of the construction phase.	C	A baseline monitoring of PM _{10/2.5} was conducted on the Zibulo North (<i>Thungela Resources Limited – Zibulo North Colliery Monthly Air Quality Monitoring Particular Matter Report, October 2023 Report</i>).
		PM10/2.5 monitoring station onsite will be installed and at least seven receptor dust deposition gauges are recommended. Monitoring must be conducted.	C	The monthly PM _{10/2.5} monitoring stations are reported to have been installed in July 2023 to assess compliance with National Environmental Management: Air Quality Act, 2004 (Act No.39 of 2004) National Ambient Air Quality Standards (NAAQS), monitoring results thereof have been provided for verification. The seven receptor dust deposition gauges are included in the Zibulo North Shaft Project dust fallout (DFO) monitoring campaign and the monitoring results thereof were reviewed by the auditor (<i>Thungela Resources Limited – Zibulo North Shaft Project Monthly Air Quality Monitoring Gavimetric Dust Fallout August 2023 Report</i>).
		Conduct dust suppression on a regular basis.	C	Dust suppression using a water truck is conducted on site (Appendix B: Figure 5).
		Monitor the dust fall out concentration and ensure that significant source of pollution is managed, annually. Ambient monitoring will be used in combination with modelling and emission inventory to assess the effectiveness of control measures at source and receivers, on an annual basis.	C	Dust Fallout monitoring is conducted at the Zibulo North Shaft Project (<i>Thungela Resources Limited – Zibulo North Shaft Project Monthly Air Quality Monitoring Gavimetric Dust Fallout August 2023 Report</i>). The monitoring campaign commenced on 01 December 2022 and the August 2023 monitoring report was reviewed. The results depict compliance with the NEM:AQA National Dust Control Regulations. Since commencement of the monitoring campaign, only Sampling Point R5 and R14 depicted an exceedance with the Residential Dust Fallout Rate.
		Traffic will be restricted to demarcated areas and traffic volumes and speeds within the shaft complex construction site will be controlled.	C	Traffic is restricted to demarcated areas and a speed limit of 40km/h is implemented on site.
		The farmers and community meetings conducted by the mine will be used for environmental reporting and community liaison on matters relating to the impacts on air quality.	N/A	Condition does not apply currently to the Zibulo North Shaft Project as the farmers and community meetings are yet to be arranged.
		Reduce unnecessary traffic and minimise travelling distance through good layout and process design.	C	Traffic management measures were implemented on site to control and minimise travelling distance on site (Appendix B: Figure 6).

		Limit the area of operation to what is necessary.	C	No evidence of non-compliance was observed during the assessment period.
		Rehabilitation of disturbed areas will be performed as soon as practicable.	N/A	Condition does not apply to the current activities at Zibulo North Shaft Project as construction is still underway.
Activity 12, 19 of Listing Notice 1, Activity 6, 15 and 17 of Listing Notice 2 and Activity 12 and 14 of Listing Notice 3: The excavation, removal and moving of soil and rock within a watercourse or within 32m thereof. These includes: section of the truck load-out access road, overland conveyor belt service road, buried potable water pipeline and overhead powerline pylons				
The construction of the above- mentioned infrastructures will result in the change of the current land surface, which will result in the change in the local drainage patterns.	Topography	The construction activities of the above- mentioned infrastructure will be undertaken within the approved footprint areas.	C	Construction activities are limited to the approved footprint area.
Although the land to be occupied by the intended infrastructure will be relatively limited in area, the temporary impacts during the construction, as well as some on- going impacts, will be significant due to the agricultural potential of the land. This will lead to loss of agricultural/soil potential.	Soils, land capability and land use	The entire area will be monitored for erosion.	C	The appointed ECO conducts inspections twice a week and monitors erosion as part of the road maintenance procedure.
		In cases where erosion does occur, action plans will be implemented to apply mitigation.	NC	Erosion was observed at various areas on the site as well as at the main access road (Appendix B: Figure 2), however, no action plans are implemented to apply mitigation.
		The construction activities will be conducted within the approved footprint area.	C	Construction activities are limited to the approved footprint area.
Inevitably, sections of the overland conveyor belt, overland conveyor belt service road, buried potable water pipeline and overhead power line pylons will have to cross wetlands, which will lead to the direct loss of wetland habitat due to clearing of wetland vegetation and excavation of the sections of the overland conveyor belt, overland conveyor belt service road, buried potable water pipeline and overhead power line pylons. In addition, at least one conveyor transfer station will also be constructed within delineated wetland habitat, increasing the direct disturbance footprint. Several of the wetlands likely to be impacted by the conveyor have been altered by cultivation activities extending marginally into the wetlands as well as through the road crossings.		Excess soils will be stockpiled at the topsoil stockpiling area, which will not be more than five meters high.	NC	The <i>Zibulo Decline survey report dated 20 October 2023</i> depicts that there are areas on the topsoil stockpile that exceed the five meters height restriction.
		Align the overland conveyor belt service road over terrestrial soils where possible.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as the conveyor belt is yet to be constructed.
		Avoid unnecessary trampling the vegetation and mudding the water resources during construction.	C	No evidence of non-compliance was observed during the site assessment.
		The proposed infrastructures will be constructed in such a manner that any spillages (contaminated water runoff) to the wetland areas are prevented.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as the culverts in the wetland areas are yet to be constructed.
		Zibulo Colliery will ensure that all applicable authorisations (EA, IWUL) are obtained before commencement.	C	The Zibulo North Shaft Project has the following environmental authorisations in place: - Integrated Environmental Authorization in terms of the National Environmental Management Act, 1998 (Act 107 of 1998) as amended read with the Environmental Impact Assessment (EIA) Regulations, 2014 as amended regarding an amendment application in respect of the Farm Strathfontein 252 IR, Farm Smithfield 44 IS, Farm Leeufontein 219 IR, and Straffontein 252 IR, within the Magisterial District of Witbank: Mpumalanga Region; dated 29 March 2023 with DMRE Reference no. (MP) 30/5/1/2/3/2/1/(305) EM. - Thungela Final Environmental Impact Report (EIR) and Environmental Management Programme (EMPr) for Zibulo North Shaft Project; dated June 2022 with DMRE Reference no. MP 30/5/1/2/2/305 MR.

				Water Use Licence in terms of Chapter 4 of the National Water Act, 1998 (Act no. 36 of 1998) Zibulo North Shaft Project; dated 30 October 2022 with Reference No. 06/B20E/CAJCICGI/12435.
		Soils contaminated by hydrocarbon fluids will be remedied using hydrocarbon spill kits or taken away for remediation offsite or for disposal. Spill kits will be supplied in sufficient quantities.	N/A	Condition could not be assessed as the wetland area could not be visited due to road access issues.
		Should large spillages occur, clean-up of the spillages will be undertaken as soon as possible.	N/A	Condition could not be assessed as the wetland area could not be visited due to road access issues.
		Agreements will be reached with the affected landowners where private land will be accessed for the purpose of the construction activities.	C	Agreements have been reached with the affected landowners where private land will be accessed for construction activities.
Loss and Disturbance of Wetland Habitat - The conveyor, potable water pipeline, service road route passes through 5 wetland systems along its course and will lead to the direct loss of wetland habitat due to clearing of wetland vegetation and excavation of the conveyor servitude. In addition, at least one conveyor transfer station will also be constructed within delineated wetland habitat, increasing the direct disturbance footprint. Several of the wetlands likely to be impacted by the infrastructures have been somewhat altered by cultivation activities extending marginally into the wetlands as well as through dam building and road crossings. Most of the affected wetlands are however largely intact.	Sensitive Landscape	Design of surface infrastructure areas will be optimised to minimise the size of the development footprint and to avoid encroachment into wetland habitat.	N/A	Condition could not be assessed as the wetland area could not be visited due to road access issues.
		All disturbance footprints will be separated from adjacent wetlands by a fence, either a security fence or as minimum a five-strand cattle fence (ideally not utilising barbed wire). The purpose of the fence is to clearly demarcate sensitive areas and prevent accidental vehicle and construction machinery access to these areas.	N/A	Condition could not be assessed as the wetland area could not be visited due to road access issues.
		All construction staff will be educated on the sensitivity of wetland areas and should be made aware of all wetland areas in close proximity to the construction sites.	C	Zibulo North indicated that staff was educated on the sensitivity of wetlands areas through the Toolbox Talk conducted by the ECO (41104759 ZNS Environmental Training material final).
Wetland Habitat Fragmentation - The conveyor route and other linear infrastructure that cross wetland habitat will lead to the fragmentation and isolation of wetland habitat as a result of vegetation clearing during the construction phase, and the presence of physical barriers, such as the conveyor itself, access roads and fences once constructed. Many of the affected wetlands provide important movement corridors through a landscape extensively transformed by cultivation.		Locate all temporary constructor's camps, laydown areas, ablution facilities etc. within the fenced off shaft footprint area.	C	The constructor's camps, laydown areas, ablution facilities are located within the fenced off shaft footprint area (Appendix B: Figure 12).
Interruption in Hydrology - The proposed infrastructures will cross several wetlands ranging from temporarily to seasonally saturated. The infrastructures may interrupt surface and/or subsurface flows, leading to flow concentration and increased risk of erosion. Outside of the delineated wetlands, the soils onsite support a perched		Develop and implement a construction stormwater management plan prior to the commencement of site clearing activities. Such a plan will aim to minimise the transport of sediment off site.	NC	Storm water management measures are being implemented as per the <i>Construction Storm water Management Plan</i> which includes graded v-drains, berms to direct water, raised platform and pumping water from collection points into water carts. However, water damming (Appendix B: Figures 3, 4 & 11) and erosion was observed at various areas on the site as well as at the main access road (Appendix B: Figure 2).

water table that, although not shallow enough to directly influence the herbaceous plant community and therefore be considered a wetland, does represent an important water resource that is responsible for sustaining the areas of wetland across the site. As such, it is important that the movement of water through the landscape, not only within the wetlands, also be maintained. Any activity or infrastructure that impedes or alters the natural subsurface flow in the catchment soils could have indirect but potentially significant effects on the wetlands. Water Quality Deterioration - Water quality deterioration within the wetlands is expected during the construction phase as a consequence of vegetation removal and the increased risk of erosion and sediment transport off exposed soils after rainfall events, and due to accidental spills of potentially hazardous or polluting materials, e.g.: diesel and oil from construction vehicles.	Erosion within the construction site will be minimised through the following:	NC	Storm water management measures are being implemented as per the <i>Construction Storm water Management Plan</i> which includes graded v-drains, berms to direct water, raised platform and pumping water from collection points into water carts. However, water damming (Appendix B: Figures 3, 4 & 11) and erosion was observed at various areas on the site as well as at the main access road (Appendix B: Figure 2).
	- Limiting the area of disturbance and vegetation clearing to as small an area as possible. - Where possible, undertaking construction during the dry season. - Phasing vegetation clearing activities and limiting the time that any one area of bare soil is exposed to erosion. - Control of stormwater flowing onto and through the site. Where required, stormwater from upslope will be diverted around the construction site; - Prompt stabilisation and re-vegetation of soils after disturbance and construction activities in an area are complete.		
	Regular inspection and maintenance of sediment controls will be conducted.	NC	The ECO conducts site inspections twice a week, however, the ECO indicated that they could not conduct inspections in the wetland areas due to road access issues.
	Ensure that no equipment is washed in the wetlands of the area, and if washing facilities are provided, will be according to the approved designs.	C	No equipment washing was undertaken on site during the audit period as the wash bay is yet to be constructed.
	Potential contaminants used and stored on site will be stored and prepared on bunded surfaces to contain spills and leaks. Sufficient spill clean-up material must be kept on site at all times to deal with minor spills. Larger spills will be reported to the ECO and the relevant authorities immediately.	C	Potential contaminants are stored in a secure and bunded storage cage on site (Appendix B: Figure 20). Spill kits were observed on site to handle hydrocarbon spills should they occur (Appendix B: Figure 10).
	No abstraction of water from the wetlands or pans will be allowed unless expressly authorized in the IWULA.	C	No abstraction of water from the wetlands or pans occurred during the audit period.
	An alien vegetation management plan will be drawn up and implemented to limit the spread of alien vegetation into wetland habitat.	NC	An alien vegetation management plan has not been compiled as per the EMP requirement.
	All disturbed areas outside the direct development footprints will be rehabilitated and re-vegetated as soon as possible.	N/A	Condition does not apply to the current activities at Zibulo North Shaft Project as construction is still underway.
	A detailed procedure for the handling, storage and disposal of waste will be developed and fully implemented during construction.	NC	Thungela has in place the <i>Zibulo Colliery Waste Management Procedure Version 9 updated on 14 November 2023</i> , however, the procedure is not adapted to reflect the current practices at Zibulo North Shaft Project.
	The construction servitudes will be regularly inspected for waste or littering and clean-up operations initiated if required.	C	The appointed ECO conducts inspections twice a week. No littering was observed on site at the time of the site assessment.
	Concentration of flows within a single culvert will be avoided.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as the culverts in the wetland areas are yet to be constructed.
	The affected Seep wetlands are maintained predominantly by interflow, i.e. the subsurface movement of water, as well as diffuse surface runoff during and immediately after rainfall events. Crossings structures must therefore make provision for maintaining flow connectivity not only for surface flow but also subsurface flow.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as the culverts in the wetland areas are yet to be constructed.

	Minimise footprint of conveyor servitude to minimise disturbance footprints within wetlands.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as the conveyor belt is yet to be constructed.
	Conveyor will follow the natural landscape profile. Cut and fill should be avoided.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as the conveyor belt is yet to be constructed.
	For valley bottom crossings (Crossings B, C, D): Conveyor to span valley bottom wetlands as far as possible; Conveyor over valley bottom wetlands will be covered with environmental gantries to prevent dust and fallout of coal directly into the valley bottom wetland. Floor of gantries will be impervious; Service road crossings will be constructed as low-level crossings/drifts that contour the bed of the valley bottom wetland.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as the culverts in the wetland areas are yet to be constructed.
	For Seep wetland crossings: Allowance will be made for sub- surface drainage underneath the conveyor servitude. This will be achieved by leaving the natural soil profile intact as far as possible with minimal compaction. Sub-surface seepage can then continue same as before. If this is not possible, introduction of a permeable drainage material may be required. If such material is more permeable than the natural soil profile, care will be taken that the conveyor servitude does not become a preferential flow path. Regular “breakers” may need to be installed.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as the culverts in the wetland areas are yet to be constructed.
	Conveyor will be designed to minimise spillage of coal and minimise generation of coal dust.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as the conveyor belt is yet to be constructed.
	Access to the wetlands within and adjacent to the construction sites will be restricted through the installation of fences and/or clearly demarcated construction servitude boundaries.	C	A fence has been erected on site to separate the disturbance footprints from the adjacent wetlands (Appendix B: Figure 12).
	Signboards will be attached to the fences in areas where high volumes of vehicular and/or human traffic occur to indicate the presence of wetland habitat and to warn against unauthorised entry.	C	Warning signs have been erected on site informing stakeholders about the wetland areas.
	Access to the wetland areas to people other than authorised individuals will be prevented. Specifically, the dumping of litter, building rubble and garden refuse within the wetland areas will be prevented. No laydown areas or temporary stockpiles will be located within any of the wetland areas. No runoff from such areas will be discharged directly and uncontrolled into any wetlands. No washing of any construction machinery or vehicles will be allowed in the wetlands on site. No unauthorised abstraction of water from wetlands for construction purposes will be allowed.	NC	The ECO conducts site inspections twice a week, however, the ECO indicated that they could not conduct inspections in the wetland areas due to road access issues.

		Conduct audit of fences and demarcation of all wetland areas prior to the commencement of large-scale vegetation clearing activities or earthmoving on site.	NC	The ECO conducts site inspections twice a week, however, the ECO indicated that they could not conduct inspections in the wetland areas due to road access issues.
		Regular walk-through surveys of adjacent wetlands and construction site perimeter to observe for signs of direct disturbance to wetlands.	NC	The ECO conducts site inspections twice a week, however, the ECO indicated that they could not conduct inspections in the wetland areas due to road access issues.
		WET-Health data (PES scores) will be collected prior to construction (included in the Wetland Impact Assessment Study) on site to be used as baseline monitoring data (every three years). The objective of wetland management plan is to retain and/or improve these baseline categories where possible, A WET-Health Level 2 or suitable alternative assessment methodology should be utilised.	C	The baseline WET-Health data (PES scores) are presented in the <i>Zibulo North Shaft Project: Wetland Delineation & Impact Assessment dated 2020</i> .
		Vegetation transects (every three years) will be conducted – to record dominant species and vegetation zonation. This will allow for monitoring of changes to vegetation due to changes in the wetting regime.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project.
Surface water runoff from construction sites, will be contaminated with hydrocarbon spillages. This may have a detrimental impact on the stream health if released. Hydrocarbon spills from vehicles can enter the stream if not removed immediately. The activities will require that the sites stripping of soil and vegetation cover. If the above activities are not controlled surface water emanating from this area will have negative impacts on the clean surface water environment.	Surface Water	Soils will be returned in the same order as it was removed.	N/A	Condition could not be assessed as the wetland area could not be visited due to road access issues.
		A small as possible area (area only approved by the relevant official) will be disturbed when construction is taking place within the wetlands.	N/A	Condition could not be assessed as the wetland area could not be visited due to road access issues.
		Construction vehicles will be regularly maintained and inspected to prevent hydrocarbon spills.	C	Mine vehicles and machinery are maintained regularly, and inspection records were verified by the auditors. Further to that Anglo implements the <i>Zibulo North Shaft TMM COP Requirements</i> Procedure on site. Pre-use checklists are undertaken prior to construction vehicle use.
		Spill kits will be kept at the construction area to allow any hydrocarbons spills to be cleaned immediately.	C	Spill kits were observed on site to handle hydrocarbon spills should they occur (Appendix B: Figure 10).
		Contaminated soil will be disposed of by a registered contractor and taken to an approved waste site.	NC	The accidental spillages that were recorded on the site's <i>Incident Register update 2023</i> was disposed as hazardous waste, however, no records of hazardous waste disposal were provided for verification.
		Training will be conducted for employees working with waste (hydrocarbon liquid), including contractors' employees.	C	Zibulo North indicated that waste management training was provided to employee and contractors through Toolbox Talk conducted by the ECO (<i>41104759 ZNS Environmental Training material final</i>).
		All spillages will be contained and the affected areas remedied. An emergency preparedness plan will be implemented.	C	The spillages that were recorded on the <i>Incident Register update 2023</i> were remedied. No spillages were observed at the time of the site assessment. Anglo implements a Procedure for Environmental Related Emergencies and Remediation which is included in Section 6 of the approved Final EIR and EMP. Further to that Anglo implements a <i>Thungela Zibulo North Shaft Emergency Preparedness Plan</i> that includes an Emergency hazardous materials and spill response contact number.

				Spill kits were observed on site to handle hydrocarbon spills should they occur (Appendix B: Figure 10).
Hydrocarbons and other chemicals might contaminate the soil layer during construction and if not removed. This could possibly affect groundwater quality.	Groundwater.	Used oil will be removed immediately after vehicle servicing.	C	No evidence of non-compliance was observed during the site assessment.
		All material with potential to pollute will be stored in secure facilities.	C	All materials with potential to pollute are stored in a secure and bunded storage cage (Appendix B: Figure 20).
		Mine machinery will be repaired at designated areas fit for purpose. No maintenance outside the dedicated areas will be allowed unless it is an emergency repairs which must be on a protected ground or by use of drip trays.	NC	A concrete vehicle maintenance slab has been constructed on site (Appendix B: Figure 19), however, the area is prone to water damming which may lead to soil contamination of adjacent areas and/or seepage from the contaminated storm water.
		All hydrocarbon liquids will be stored in leak and corrosion resistant containers. These containers will be placed in bunded areas. The containers used for the storage of hydrocarbon liquids will be maintained in good condition.	C	Hydrocarbon liquids are stored in a leak and corrosion resistant bunded storage cage (Appendix B: Figure 20). The storage container was observed to be in good condition,
		All spillages will be contained and the affected areas remedied. An emergency preparedness plan, which will be in line with the mine's environmental emergency plan and the norms and standards for the waste storage facilities will be used. Where necessary, sufficient supply of absorbent fibre will be kept at site to contain accidental spills.	C	Anglo implements a Procedure for Environmental Related Emergencies and Remediation which is included in Section 6 of the approved Final EIR and EMPr. Further to that Anglo implements a <i>Thungela Zibulo North Shaft Emergency Preparedness Plan</i> that includes an Emergency hazardous materials and spill response contact number. Spill kits were observed on site to handle hydrocarbon spills should they occur (Appendix B: Figure 10).
		Training for the waste storage facilities will be conducted for employees working with waste (hydrocarbon liquid), including contractors' employees.	C	Zibulo North indicated that waste management training was provided to employee and contractors through Toolbox Talk conducted by the ECO (41104759 ZNS <i>Environmental Training material final</i>).
		Credible waste collectors will be used for the removal of waste from the site to registered waste disposal facilities.	NC	Although general waste is disposed of at a permitted landfill site by Enviroserv who have been appointed to manage general waste and construction rubble (<i>Proof of site delivery Manifest, Enviroserv Certificates</i>), no records of hazardous waste disposal and Tallisman chemical toilet waste disposal was provided to the auditor.
OPERATIONAL PHASE				
Activity 34 of Listing Notice 1: Mining of the No. 2 Seam using underground mining method.				
Activity 6 of Listing Notice 2 and Activity 12 of Listing Notice 3: The underground mining requires a need for a WUL.				
Disruption of geological profile.	Geology/Topography	Ensure that the removal of the No. 2 coal seam by underground mining method will leave underground pillars intact as per approved underground mining designs.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Safety factors will be used during mining to determine the sizes of the pillars to be left behind. A safety factor of more than 2.0 will be used where structures and sensitive landscapes will be undermined.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.

		Previously mined underground areas with high risk of subsidence will be backfilled to ensure stability of the mined-out areas by strengthening the pillars.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Should any surface subsidence be encountered, the affected area will be rehabilitated to be free draining and to have good vegetation cover that can support pre-subsidence ecosystem.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		The affected landowners will be compensated for any loss suffered. Compensation actions will be investigated.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Should any underground workings subside, mining will be stopped in the area at risk and employees in the vicinity of the Low safety factor area will be evacuated from the workings. No mining will be undertaken until it can be proven safe to do so.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
Loss of surface water runoff and pollution of surface water due to surface subsidence. If surface subsidence occurs, storm water generated from these areas will no longer contribute to the flow in the surface water systems. The worst-case scenario is that the full underground area results in surface subsidence and cracking which results in zero catchment yield from these areas.	Surface Water	Mining will be undertaken as per mining design specifications. However, should surface subsidence be encountered during mining, the affected area will be rehabilitated to be free draining and to have good vegetation cover that can support pre-subsidence ecosystem.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		The undermining of wetlands will be limited to the approved areas to avoid any future underground mine failure and the subsequent formation of cracks linking the shallow perched aquifer with the deeper fractured rock aquifer containing the proposed underground workings.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Where decant cannot be prevented, a water management strategy will therefore be developed and implemented on site that will ensure that water levels within the mined-out areas are actively managed post-mining so that decant is prevented and no contaminated water is discharged into the environment untreated.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		It is unlikely that subsidence will occur. As is best practice, the mining plan would have been designed to prevent surface subsidence. If the mining plan has been designed to mitigate against surface subsidence, no further mitigation measures are necessary.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
Lowering of groundwater levels during mining: Groundwater inflows into the underground mine voids change the volume of groundwater in the aquifer storage (lowering of water table) and re-directs local to regional groundwater flow towards the mine voids (representing a new, lower drainage elevation). Where the depth to mining	Groundwater	All groundwater boreholes within the zone of influence of the groundwater drawdown will be monitored for static groundwater levels on a quarterly basis.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		If it can be proven that the mine is indeed affecting the quantity of groundwater available to certain users, the affected parties will be compensated. Compensation actions will be investigated.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.

(of No 2 seam) is within the shallow aquifer a more pronounced impact is evident with higher expected mine inflows. In these areas the underground mining may impact on: • groundwater baseflow, shallow springs/seepages yield (within the depicted cone of dewatering area, • groundwater users, which rely at least partially on groundwater within the shallow and deeper fractured aquifer, within the depicted cone of dewatering area.		Should the results of the groundwater monitoring prove that the drawdown is affecting the undermined water bodies, the mine will investigate and take reasonable measures to address the impacts on affected water resources.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		The groundwater numerical model will be updated during operational phase of the mine to identify any additional decant.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
The lowering of the water table may result in a partial to complete reduction of borehole yields within the affected areas.		Continuous monitoring of underground mine inflows (daily quantity and quarterly quality) and water levels (quarterly) within the predicted zone of dewatering.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Groundwater inflows into the underground mining areas will be minimised by grouting, measured during abstraction (using a flow meter), re-used in the operations, or disposed of in an environmentally acceptable way. Depending on observed water qualities, treatment might be required before disposal.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		The numerical model and geochemical study will be updated biennially during the life of mine to calibrate and validate its results and to inform effective water management and closure planning.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Monitoring of mine effluent and seepage will be performed to assure protection of the environment. Monitoring and field testing provide early detection of potential environmental issues, allowing evaluation and, if necessary, adaptive management interventions.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Mine design should consider the expected decant point and, where possible, will alter the mine plan to have the decant point located outside any wetland or watercourse habitat, with sufficient space between the expected decant point and adjacent wetlands or watercourses to allow for suitable management interventions.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
The undermining of sensitive landscapes may result in the following impacts i.e.: 1. Decreased Flow – Decreased flow within overlying and adjacent wetlands due to abstraction and drawdown of groundwater. 2. Altered Flow Characteristics – Altered flow characteristics in wetlands and loss of flow due to surface subsidence within or in close proximity to wetlands. Surface subsidence or fracturing of rocks overlying the underground mine could lead to the creation of preferential flow paths and subsequent loss of flow from the wetlands	Sensitive Landscape	It will be ensured that no surface subsidence, sinkholes or fracturing to surface takes place within the Wilge River floodplain or within the central pan wetland and its immediate surrounding catchment.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Undermining of wetlands will be limited to the approved footprint areas.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Surface subsidence under wetlands and in close proximity to wetlands will be avoided and a suitable pillar safety factor should be implemented to ensure this. As a minimum, no subsidence or sinkholes be allowed to take	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.

into the mine workings as well as alter the surface topography of wetlands leading to changes in water distribution and retention patterns within the wetlands. 3. Water Quality Deterioration - Water quality deterioration in wetlands due to decant of contaminated mine water. After closure the mined out voids are likely to fill with water over time, eventually leading to decant of water into surface water resources. Decant water is likely to be acidic, metal rich and of high salinity.		place within delineated wetland areas. Stability of the overlying strata must be ensured in the long-term, i.e. permanently.		
		A groundwater monitoring strategy as per the recommendations of the groundwater specialist report will be implemented to monitor groundwater levels in the surrounding area. This should include monitoring of the shallow weathered aquifer water levels and water quality.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		The likelihood of decant, as well as its location and expected quality will be accurately determined at a high level of confidence and measures put in place to ensure that no decant or discharge of contaminated water occurs, unless it meets the applicable resource quality objectives (RQO's).	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Where the RQO's are exceeded, contaminated water will need to be treated. Where decant cannot be prevented, a water management strategy will therefore be developed and implemented on site that will ensure that water levels within the mined-out areas are actively managed post-mining so that decant is prevented and no contaminated water is discharged into the environment untreated.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Opportunities for the alternative treatment options for mine water post closure will also be investigated to reduce maintenance costs and responsibilities of water treatment post closure.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Mine design will consider the expected decant point and where possible be optimised to ensure to as far as possible prevent decant as predicted by the groundwater modelling. Where possible and if decant cannot be prevented, mine designs will target to have the decant point located outside any wetland or watercourse habitat, with sufficient space between the expected decant point and adjacent wetlands or watercourses to allow for suitable management interventions, including potentially the passive treatment of decant.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		A clear action plan will be developed to respond to water quality problems picked up by regular monitoring.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
Generated dust within the mine workings may affect the health of the mine employees.	Air quality.	Sufficient dust suppression will be undertaken to reduce the impacts of the generated dust on employees.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Employees will be provided with dust masks and will be instructed to use the dust masks.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.

Noise generated from the operation of the mine machinery within the mine workings may have health effects on the mine employees.	Noise.	Limit the maximum speed on the haul roads to 20 km/h or less, subject to risk assessment.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Ensure that the mine employees are issued with earplugs and that they are instructed to use them.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Educate employees on the dangers of hearing loss due to mine machinery noise.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Any deviation detected by the noise monitoring results must be addressed.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
Activity 17 of listing notice 2: Transportation of coal from the underground mine Workings to the coal stockpile silo thereafter to the destined clients. This include the use of conveyor belts and trucks.				
During the operational phase, number of vehicles will be driving around the site, transportation of coal using trucks and conveyor belts will be conducted. This may result in the following impacts: If the vehicles are poorly maintained, hydrocarbon spills could cause pollution if washed off roads by storm water. The transportation of coal may, if the conveyor belt is not properly managed, results in the spillage of coal beyond the conveyor belt footprint area, which will result in the contamination of the area beyond the conveyor belt footprint area. This may have an impact on the clean water environment and the wetlands and may affect the properties surrounding landowners. These include natural vegetation, animal life, cultivated lands, roads and any other infrastructures. Coal spillages may result, if the loading of coal trucks is not supervised for prevent overloading.		All trucks used for the transportation of coal will be covered with tarpaulins during coal transportation.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		All spilled coal along the roads and the conveyor routes will be cleared immediately.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Trucks will be required to obey certain road regulations when transporting coal at the mine. This will include speed limits etc.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences..
Impact on surface water and sensitive landscape due to the transportation of coal material.	Surface Water and Sensitive landscape	Loading of coal trucks will be supervised to prevent overloading. The road must be designed and operate to minimise the likelihood of spillages. All vehicles will only use designated roads with no indiscriminate driving through wetland or riparian areas.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Should large spillages occur, clean-up of the spillages will be undertaken as soon as possible following the event.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.

		Dust suppression will be undertaken at the facilities, roads and along the conveyor routes to prevent generation of excessive dust.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Any streams and wetlands crossed by the conveyor route will be rehabilitated using site-appropriate indigenous vegetation and/or seed mixes.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		The operation of the overland conveyor belt must be undertaken to comply with GNR 704 of the NWA. Storm water from dirty area must be routed to a dirty water management system, in accordance with GNR 704 of the NWA. Should a legal discharge occur as a result of extreme rainfall conditions, the surface water systems should have enough capacity to dilute poor quality water. The impacts from extreme rainfall conditions should be low and will last for a short duration.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
Increased noise levels due to the transportation of coal.	Noise	As much as possible, transportation routes will be used during the day time.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		If roads/routes are to be used during the night-times will be routed as far as possible away from a receptor. If the receptors cannot be avoided, an agreement will be reached with the affected parties.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway.
Disruption in daily living and movement patterns	Socio- Economic effects	Routes to be used for the transportation of coal will be agreed with the affected parties. Keep communication with neighbouring land owners, land occupiers and the public (interested and affected parties) open during the operational phase of the project.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
Air pollution through air pollutants' emissions and spontaneous combustion from the mining site.	Air quality.	Wet suppression using water carts will be conducted along the transportation routes. The conveyor belt will be covered to minimise dust generation. The covering will be in accordance with the design specifications.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
Erosion as a result of run-off and compaction. Contamination as a result of spillages from the operational activities.	Soils, Land Use and Land Capability.	The footprint of the shaft and associated infrastructure/facilities will be maintained to be within the approved perimeters. Areas with erosion gullies and sedimentation build up will be rehabilitated. Areas with compaction will be ripped and seeded.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		The stockpiled topsoil will be maintained to have good vegetation cover. Bare areas where no further activities will take place will be identified and re-vegetated with a recommended seed mix.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		The stockpiled topsoil will be maintained to be within the approved height of five meters.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.

Storm water and seepage generated from these dirty areas will likely be contaminated and have a detrimental effect on the water quality in the local streams and the Wilge River. These impacts will be most acute during the dry season when stream flows are low.	Surface Water	The activities will be undertaken to comply with Government Notice 704 of NWA.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Storm water from dirty areas will be routed to a dirty water management system, in accordance with Government Notice 704 of the NWA.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		The PCD will be operated and maintained in accordance with regulations under the Government Notice 704 of the NWA.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Contaminated shallow seepage and storm water run-off from the dirty water areas will be collected and routed to a lined PCD.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		The PCD water levels will be kept within operating levels and levels constantly monitored.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		The PCD will be operated empty as far as practicable and cannot fulfil the same role as a water storage dam, unless specifically designed to fulfil both purposes.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
Surface Water impacts due to wash bays and workshops, hydrocarbon storage facilities.		All drains that collect the wash water and storm water will be maintained regularly. These should be free of debris and silt.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		All diversion canals, trenches and conduits will be designed to convey run-off from a 50-year design storm.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		The wash bays, hydrocarbon storage facilities and workshops will be equipped with oil separators to remove hydrocarbons from wash down water.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		All vehicles will be well maintained and inspected for hydrocarbon leaks weekly.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Wash bay discharge water will flow through an oil separator.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Fuel depots and refuelling areas will be bunded.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.

		Chemicals will be stored in a central secure area. Regular training on the responsible handling of chemicals should be undertaken. If contract plant is being used, responsible handling of chemicals and vehicle maintenance will be a key performance objective of the plant contractor.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
Storm water and seepage generated from these dirty areas will likely be contaminated and have a detrimental effect on the water quality in the local streams and the Wilge River. These impacts will be most acute during the dry season when stream flows are low.		Surface water monitoring will be conducted to observe any water quality deterioration from the mining activities.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Should the surface monitoring indicate water quality contamination, the surface water users will be informed of the outcomes and Zibulo Colliery to investigate and identify action plans to remediate the impact.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
Pollution of the groundwater regime by leakage and seepage from the PCD and their storm water diversion structures, workshop and laydown areas and hydrocarbon storage facilities. Sewage contamination of groundwater.	Groundwater	Monitoring of water and waste storage facilities is imperative to manage the risk of spillage.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Monitoring of water (shallow groundwater) and waste storage facilities is imperative to manage the risk of spillage and leakage.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Operate and manage the dirty water structures (PCD, dirty water diversion trenches, sewage works and water pipelines) such that it does not leak, seep or discharge dirty water into the groundwater regime. The pollution control will be lined with an HPDE liner and the trenches will be concrete lined.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		The PCD will be constructed to have leak detection system. The PCD to be designed to have a leak collection system with a pump with sufficient capacity to remove all leaked seepage water.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		The areas will be monitored for any spillages and spillages will be cleaned up immediately and the contaminated soil disposed of at the suitable area.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
Diffuse pollution of groundwater from mining related surface pollution sources (contaminated stockpile).		Develop a groundwater monitoring to determine (and confirm) extent of pollution plumes. This programme will ensure that shallow groundwater regime is monitored.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Modified Class C containment barrier design considered sufficient to mitigate the plume and risk to ground water resource. No receptors will be located within the predicted plume extent.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Update numerical groundwater flow and transport model. Monitoring results to inform the frequency of model updates.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.

		The mine will develop and maintain a Standard Operating Procedure to contain and remediate any accidental hydrocarbon or other chemical spillages.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		The numerical model and geochemical study will be updated biennially during the life of mine to calibrate and validate its results and to inform effective water management and closure planning.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Sewage Management will be conducted in compliance with the Zibulo Colliery Sewage Management Standard Procedure and the mine's relevant water use license conditions.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
Deterioration of water quality within the affected wetlands and destruction of the wetlands. Decreased flow within wetlands adjacent to the shaft footprint	Sensitive Landscapes	Ensure that effective clean and dirty water separation are undertaken. Measures such as storm water diversion trenches, channels and silt traps will be used for the diversion and collection of clean and dirty water. The silt trap will be operated empty as possible.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Monitor the stretch of the dirty water trenches and water pipelines for spillages/leaks and where such spillages/leaks occur, the area will be remedied as soon as possible.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		All water management infrastructure on site will be inspected at least twice per year, ideally just before the start of the wet season and then again during the middle of the wet season, for any damage or obstructions. Obstructions will be cleared and damage repaired immediately to ensure optimal operation of the infrastructure.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Implement the surface water management plan that will ensure effective clean and dirty water separation.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Implement and maintain dirty water infrastructure around all sources of potential dirty water. Regular inspections of all water management infrastructures will be undertaken and detailed records of such inspections maintained.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Minimise extent of dirty water areas.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Ensure all clean water is diverted around dirty water areas and allowed to re-enter the environment.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Implement dust suppression within areas where carbonaceous dust may be generated and areas of heavy vehicle traffic. Implement dust suppression on haul trucks.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.

		Implement water quality strategy.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Compile an emergency response procedure for clean-up of any major spillages.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		All areas involving the handling of carbonaceous material and coal will be considered dirty water areas and will be isolated from the surrounding catchment. No run-off from the coal stockpile will be discharged to the environment.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		The topsoil stockpile will be located within a clean water area and no contaminated water will come into contact with the topsoil stockpiles. Side slopes of the topsoil stockpiles will be kept as low as possible and should ideally be vegetated to minimise sediment loss and colonisation by alien/weed vegetation.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		The PCD will be lined and designed according to industry best practice.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Should leakage or discharges occur, clean-up and rehabilitation of the affected areas will be undertaken as soon as possible following the event.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
Degradation of topsoil.	Soils	Implement dust suppression along the conveyor belt service road.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
The roads have the potential to increase erosion and sedimentation of wetlands throughout life of mine if storm water is not properly incorporated into the design philosophy of the roads.	Sensitive Landscape	Ensure that storm water structures and gabions are monitored and well maintained.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		The road will be designed and operate to minimise the likelihood of spillages. All vehicles will only use designated roads with no indiscriminate driving through wetland or riparian areas.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Should large spillages occur, clean-up of the spillages will be undertaken as soon as possible following the event.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Dust suppression will be undertaken at the facility and roads to prevent generation of excessive dust.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.

Air pollution through air pollutants from the operation of the roads.	Air quality. Noise	Priority will be given to continuous monitoring of ambient dust deposition rates for the full duration of the project.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		An emissions inventory and five-year modelling regime will be maintained throughout the life of the project.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Enforce speed limits of 60km/h for the mine vehicles.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
Noise generated from the operation of the roads may have impacts on surrounding property owners and occupiers.		Ensure routeing has less impacts on sensitive receptors.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Limit vehicle speed (60km/h) within the mining right area.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Ensuring all equipment in use is maintained and equipped with the OEM's required muffler/exhaust/silencer.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		The mine will consider the sound rating of equipment when selecting equipment.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		The mine will maintain a healthy consultative relationship with surrounding communities and landowners in order to facilitate the sharing of knowledge and possible complaints as well as proposed corrective/preventative actions between parties.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Zibulo Colliery will (if feasible) try and use the access routes only during the daytime. Should an emergency arise that requires constant use of the route during the night-times (more than 10 vehicles in an hour), Zibulo Colliery will indicate this to receptors R4 – R6 by keeping constant communication.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Prior to operations, Zibulo Colliery will discuss the use of access routes with receptors to indicate the use of the routes during night-time hours.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Should Zibulo Colliery make use of access routes every night with +10 light vehicles, then the approved EMPr and the noise study will be amended, or other mitigation considered (berms, barriers, alternatives etc.).	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.

		The Zibulo Colliery will implement a small berm at their entrance (opposite of the entrance), and in relation to receptor R7 (if feasible).	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		The mine will keep continuous communication with receptors R1 – R8 regarding noises and potential loud noise events.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		A contact line will be made available to receptors should a valid noise complaint arise whereby receptors could lodge a complaint (and documented). Should a valid noise complaint be lodged, the Environmental Co-ordinator will contact an acoustical consultant with experience in noise monitoring to evaluate the complaint.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Quarterly ambient noise measurements will be conducted at receptor R2 – R8. The Environmental measurements will be conducted at I&AP's i.e. farmsteads, receptors, communities.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Onsite noise measurements will be considered on a frequent basis, to help identify any fault or loud equipment that may require enclosures or maintenance. It will be conducted at a frequency determined by the project team or environmental coordinator.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
Traffic impacts may result from the movement of vehicles around and within the mining area.	Traffic	It is proposed that the D686 be surfaced from 100m south of the southern access position, up to the existing surfacing to the north.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Regarding non-motorised and public transport, a taxi and bus Pick-up and Drop- off zone is proposed on site for the use of employees.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		A Speed limit of 60km/h will be enforced, and the proposed Speed Limit Signs are to be erected on both sides of the access positions on the D686 within 200m of the proposed access road positions.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		The proposed "Heavy Vehicles" Turning Signs will be erected on both sides of the access positions on the D686.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		U-turn space will be provided on the site to avoid dangerous movements within the site.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		A minimum stacking space of 225m (space for nine trucks) will be provided at the proposed accesses in front of any gate or boom, to avoid queueing onto the road and disrupting the traffic.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.

		Surfacing of the D686 as well as the access roads will reduce the dust and increase visibility for vehicles both on the D686 and vehicles exiting the site.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		D686 will be surfaced from 100m south of the southern access position, up to the existing surfacing to the north.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		The load out facility has been designed to accommodate the required fleet of trucks within the mine property and no queuing will be envisaged outside of the mine complex.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
Visual impacts on the surrounding communities and road users from the operation site may result.	Aesthetics	Limit areas of disturbance to areas where the roads will be used.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Dust suppression will be undertaken at all areas that will be affected by operational activities and where dust will be generated.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Avoid upwards lighting of structures but rather direct the light downwards to focus on the object to be illuminated.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
The operational phase for the proposed infrastructures will lead to compaction and erosion of soil resources.	Soils	All areas necessary for the optimal operation will be kept as small as practically possible.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		A soil stripping and stockpiling plan must be compiled.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		The water pipeline structures will be operated to have a leak detection system.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
Disturbance and degradation of wetland habitat. Disturbance and displacement of wetland associated fauna and flora. Increase in alien vegetation. Erosion and/or sediment deposition within wetlands. Water quality deterioration, specifically increased turbidity.	Sensitive Landscape	Avoid any further operation within the identified wetlands, apart from the approved footprint areas.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Flow connectivity across the affected wetlands, will be maintained. In this regard important considerations include the following: Affected valley bottom wetlands are all naturally unchanneled systems. Provision will therefore be made for surface flow across the full width of the valley bottom wetlands. Concentration of flows within a single culvert will be avoided. The affected Seep wetlands are maintained predominantly by interflow,	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.

		i.e. the subsurface movement of water, as well as diffuse surface runoff during and immediately after rainfall events. Crossings structures will therefore make provision for maintaining flow connectivity not only for surface flow but also subsurface flow.		
		Conveyor over valley bottom wetlands will be covered with environmental gantries to prevent dust and fallout of coal directly into the valley bottom wetland. Floor of gantries must be impervious.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Regular allowance will be made for surface flow to pass underneath the conveyor.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		To prevent the margins of the conveyor servitude becoming preferential flow paths and possible erosion nick points, measures such as low berms will be installed along the margins of the conveyor servitude at especially crossings B, C and D. Such berms will be kept to the smallest footprint required so as to limit unnecessary disturbance to wetland habitat.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Conveyor will be designed to minimise spillage of coal and minimise generation of coal dust.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Implement storm water management plan.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		If a spill does occur, report to relevant authorities, and attain relevant permissions to scrape clean with a bulldozer and landscape to avoid the creation of preferential flow paths which turn into erosion gullies later.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Ensure that effective clean and dirty water separation are undertaken. All dirty water runoff will be diverted/drained into the PCD for re-use.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		The Present Ecological State of the wetland features will be maintained and not decreased due to any activities within or surrounding these wetland features.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Regular inspections of the infrastructures/facilities will be conducted.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Existing water quality monitoring and biomonitoring will be continued to ensure monitoring of all receiving water resources.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.

		Regular inspection and maintenance of sediment controls will be conducted.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Ensure that no equipment is washed in the wetlands of the area.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Potential contaminants used and stored on site will be stored and prepared on bunded surfaces to contain spills and leaks. Sufficient spill clean-up material will be kept on site at all times to deal with minor spills. Larger spills will be reported to the ECO and the relevant authorities immediately.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		No abstraction of water from the wetlands or pans will be allowed unless expressly authorized in the IWULA.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		An alien vegetation management plan will be drawn up and implemented to limit the spread of alien vegetation into wetland habitat.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		All disturbed areas outside the direct development footprints will be rehabilitated and re-vegetated as soon as possible.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		A detailed procedure for the handling, storage and disposal of waste will be developed and implemented.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		The servitudes will be regularly inspected for waste or littering and clean-up operations initiated if required.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
Oil spillages are likely to occur which will pose negative impacts to water resources quality.	Surface and Groundwater	All water that falls within the catchment area of the Structures will be retained within that area.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		All water management structures constructed to isolate the structures from the clean water environment and contain dirty water (drains, pipelines, sumps and pumping systems) will be maintained in good order and will not be allowed to spill to the clean water environment.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Contaminated storm water runoff from the Structures will be collected and routed to the PCD.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.

		All clean water will be diverted around the areas to the nearby streams and pans.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		The water management system will be maintained to be in compliance with the requirements of the GN704. If any activity is not complying with the requirements of the regulations under the GN704, exemptions will be sought from the DWS. This will ensure that the surrounding surface water environment is not affected.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		The operation of the overland conveyor belt will be undertaken to comply with GNR 704 of the NWA. Storm water from dirty area will be routed to a dirty water management system, in accordance with GNR 704 of the NWA. Should a legal discharge occur as a result of extreme rainfall conditions, the surface water systems will have enough capacity to dilute poor quality water. The impacts from extreme rainfall conditions will be low and will last for a short duration.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Surface and groundwater monitoring will be conducted.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		If it can be proven that the mine is indeed affecting the quantity of groundwater available to certain users, compensation investigations will be conducted.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Mine machinery will be repaired in the workshop. No maintenance outside the dedicated workshop will be allowed unless it is emergency repairs which must be on protected ground.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		All spillages will be contained and the affected areas remedied. An emergency preparedness plan, which will be in line with the mine's environmental emergency plan and the norms and standards for the waste storage facilities will be used. Where necessary, sufficient supply of absorbent fibre will be kept at site to contain accidental spills.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Training for the waste storage facilities will be conducted for employees working with waste (hydrocarbon liquid), including contractors' employees.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Credible waste collectors will be used for the removal of waste from the site to a registered waste disposal facility.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
Movement of mine vehicles over exposed areas will result in the generation of dust. Generated dust will migrate	Air Quality	Baseline monitoring at these sites will commence at least one year prior to the onset of the construction phase.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.

towards the predominant wind direction and may settle on surrounding farm houses.		PM10/2.5 monitoring will be conducted.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Conduct dust suppression on haul and access roads on a regular basis.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Monitor the dust fall out concentration and ensure that significant source of pollution is managed, annually. Ambient monitoring will be used in combination with modelling and emission inventory to assess the effectiveness of control measures at source and receivers, on an annual basis.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Traffic will be restricted to demarcated areas and traffic volumes and speeds within the shaft complex construction site will be controlled.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		The farmers and community meetings conducted by the mine will be used for environmental reporting and community liaison on matters relating to the impacts on air quality.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Reduce unnecessary traffic and minimise travelling distance through good layout and process design.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Limit the area of operation to what is necessary.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Rehabilitation of disturbed areas will be performed as soon as practicable.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
Noise generated from the operation of the structures may have health effects on the mine employees and surrounding farmers and communities.	Noise.	Limit the maximum speed on the haul roads to 60 km/h or less.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Ensure that the employees are issued with earplugs and that they are instructed to use them.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Educate employees on the dangers of hearing loss due to conveyor belt noise.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.

		Any deviation detected by the noise monitoring results will be addressed.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		All equipment (especially transfer points, conveyor drive systems etc.) will be enclosed where practically possible.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Equipment will be well maintained and fitted with the correct and appropriate noise abatement measures such as acoustical mufflers (or silencers),	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Smaller or less quitter equipment will where possible be used when operating near receptors.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
Combined Results of the Impact Assessment and Mitigation Measures: Activity, 12, 19 of Listing Notice 1, Activity 6 and 17 of Listing Notice 2 and 14 of Listing Notice 3: Operation of the overland conveyor belt, overland conveyor belt service road, buried potable water pipeline and overhead powerline pylons. Activity 6 and 17 of Listing Notice 1: Operation/use of the Surface Infrastructure connected to the proposed Zibulo North Shaft Complex area (Offices/ workshops and related buildings, Contractor’s site, Sewage Treatment Facility, Load-out Station, Eskom Substation, Clean and Contaminated Overburden Stockpiles, Potable Water Storage Facility, Waste Storage Facility, Ventilation Shaft, Stone Dust Silo, Coal Storage area, internal and external roads and Water management structures (PCD, sumps and diversion structures). Activity 10 and 11 under category B: The establishment of the temporary contaminated overburden stockpile, maintenance of the PCD and the STP. Activity 7 under category B: The disposal of dirty water to the PCD, disposal of the contaminated overburden material at the stockpiling facility and disposal of sewage waste water into the PCD. Activity 24 of Listing Notice 1 and Activity 6 and 17 of Listing Notice 2: Operation/use of Access, Internal and Service Roads. Activity 12 and 19 of Listing Notice 1 and Activity 12 and 14 of Listing Notice 3: Operation/use of Main Access Road, Load-Out Station Access Road and The Conveyor Belt Service Road.				
The development of the Zibulo North Shaft Project may result in the disturbance of heritage sites. It is also possible that one site close to the shaft complex may be affected by the operational activities the areas not be managed according to the Heritage Study.	Sites of archaeological and cultural importance.	Fence all graveyards in and have a grave management plan drafted for the sustainable preservation thereof. These include graveyards no 2 (within 1 km from the overland conveyor belt) and no 3 (within 1 km from the ventilation shaft). The grave management plan will be written by a heritage expert. This usually is done when the graves are in no danger of being damaged, but where there will be a secondary impact due to the activities of the mine.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Upon finding any archaeological or historical material, all work at the affected area will cease.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		The area will be demarcated in order to prevent any further work there until an investigation has been completed. An archaeologist will be contacted immediately to provide advice on the matter. Should it be a minor issue, the archaeologist will decide on future action, which could include adapting the HIA or not. Depending on the nature of the find, it may include a site visit. If needed, the necessary permit will be applied for with SAHRA. This will be done in conjunction with the appointed archaeologist.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.

		The removal of such archaeological material will be done by the archaeologist in lieu of the approval given by SAHRA, including any conditions stipulated by the latter. Work on site will only continue after removal of the archaeological/ historical material was done.		
		Access will be provided to the families of the grave sites identified within the project area. Regulated visitor hours will be implemented that is compatible with mine safety rules.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		The families of the grave sites identified within the project area currently have access to these areas. Should alternatives to access the cultural heritage sites be identified during commencement of the project, the families will be notified.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
Traffic impacts may result from the movement of vehicles around and within the shaft area.	Traffic Impact	A Speed limit of 60km/h will be enforced, and the proposed speed limit signs are to be erected.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Traffic will be restricted to demarcated areas and traffic volumes and speeds within the shaft complex areas will be controlled.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
Noise generated from the activities may add to the current noise levels. This may have impacts on surrounding property owners and occupiers.	Noise	Toolbox talks will be conducted to educate their employees and ensure that they are aware of the legislation regarding noise.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Contractors and employees will be wary of noise levels is working near receptors R4 – R8.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		The ECO will keep continuous communication with receptors R1 – R8 regarding noises and potential loud noise events.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		A contact line will be made available to receptors should a valid noise complaint arise whereby receptors could lodge a complaint (and documented). Should a valid noise complaint be lodged, the ECO will contact an acoustical consultant with experience in noise monitoring to evaluate the complaint.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Onsite noise measurements will be considered on a frequent basis, to help identify any fault or loud equipment that may require enclosures or maintenance. It will be conducted at a frequency determined by the project team or environmental coordinator.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.

Visual impacts on the surrounding communities and road users from the operational site.	Aesthetics	Where possible areas disturbed by operational activity, will be suitably top soiled and vegetated as soon as is possible. The progressive rehabilitation measures will allow for the maximum growth period before the completion of the project.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Limit areas of disturbance to areas where the operational activities are conducted.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Dust suppression will be undertaken at all areas that will be affected by operational activities and where dust will be generated.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Avoid upwards lighting of structures but rather direct the light downwards to focus on the object to be illuminated.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		All existing large trees (if any) that fall outside the earthworks area will be retained. These will assist in softening the forms of the structures and obscure views to them.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		The constructed earthworks and landscapes will be maintained to reduce the visual impacts. These will include maintaining the vegetation cover over the topsoil stockpiles. The heights of these facilities will not be increased during the operational phase.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Lighting will be conducted in manner that will reduce the impacts on visual aspects. These will include factors such as placing lights in areas and angles that will not shine towards the communities.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences. commenced in May 2023. This condition will be audited when the operational phase commences.
The fact that most of the proposed infrastructure will be situated in crop production areas, already devoid of all-natural vegetation, must be taken into consideration. The remaining grassland areas within the Zibulo Colliery North Shaft area that will be negatively impacted by the placement of the overland conveyor belt, overland conveyor belt service road, buried potable water pipeline and overhead power line pylons areas are very small in relation to the total project area. The activities above will result in the following: Direct loss of grassland habitat, reduction in volume of water entering the grassland areas, increase in volume of water entering the grassland areas, alteration in drainage flow pattern through	Biodiversity	All activities will be undertaken within the approved footprint area.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		No machinery will be serviced within the grassland/wetland areas.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Domestic waste will be collected on site and must not end up in the veldt (wetland or terrestrial).	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Dust suppression will be conducted regularly in order to have the least amount of dust settling on grassland/wetland vegetation.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.

grassland areas, increased soil sediment loads via surface water runoff, dust generation, transportation onto grassland plants, contamination of ground and surface water, increased incidence of erosion, increase in declared invader species, oil, lubricant, chemical spills, disturbance of flora and fauna species of concern.		Machinery will be kept in good working order to curb hydrocarbon leaks and spills that may contaminate the groundwater.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Emergency maintenance will be conducted on protected ground (drip trays/tarpaulins).	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		No snares will be set, no poaching of animals or plants may occur.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		The area will be fenced so that personnel working in this area cannot wander into the grassland/wetland areas and cause any disturbance.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
Movement of mine vehicles over exposed areas will result in the generation of dust. Generated dust will migrate towards the predominant wind direction and may settle on surrounding farm houses.	Air Quality	PM10/2.5 monitoring will be undertaken.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Conduct dust suppression on haul and access roads on a regular basis.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Monitor the dust fall out concentration and ensure that significant source of pollution is managed.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Traffic will be restricted to demarcated areas and traffic volumes and speeds within the shaft complex site will be controlled.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		The farmers and community meetings conducted by the mine will be used for environmental reporting and community liaison on matters relating to the impacts on air quality.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Reduce unnecessary traffic and minimise travelling distance through good layout and process design.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Limit the area of operation to what is necessary.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Rehabilitation of disturbed areas should be performed as soon as practicable.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.

Influx of job seekers.	Socio economic aspects	The proportion of job opportunities allocated to the local population will be maximised.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Ensure good communication between the operation and surface owners and farmers whose properties might be directly affected by the population influx. Local councillors will be involved in the above communication.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
Skills Development and Skills Transfer.		Where possible skills development should focus on scarce skills.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
Increase in the Spread of Communicable Diseases and Social Pathologies Linked to the Influx of Workers.		Zibulo will continue implementing and enhancing their HIV/AIDS and health related programs for employees and community members.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Zibulo will ensure that the socio- economic realities are included in their worker induction programs and that workers understand the code of conduct of the organisation. This will also apply to contractors and sub-contractors.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Zibulo Colliery has established a communication strategy that encourages local stakeholders to communicate with the mine and has put in place monitoring and evaluation procedures to track the effectiveness of the engagement processes.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Zibulo Colliery is in the process of establishing a verification committee that includes local councillors however opportunities created by digital technology should be considered in order to make the verification process more effective and efficient.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
Increased nuisance factors and changed sense of place.		Liaise frequently with affected stakeholders to ensure they have information about activities that will generate nuisance factors. Implement grievance mechanisms effectively.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
DECOMMISSIONING AND CLOSURE PHASE				
Removal of infrastructure, backfilling/sealing of the shaft and rehabilitation of disturbed areas.				
Formation of topographical voids and highpoints.	Topography	All backfilled areas will be levelled and levelled areas monitored for any settlement depressions, which must be rectified as soon as possible.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
Compaction and contamination of soils within the rehabilitation site.	Soils	All vehicles and machinery used at the rehabilitation site will be kept in good working order.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.

		No repairs of mine vehicles or machinery will be conducted at the rehabilitation site unless it is emergency repairs, which will be conducted on protected ground.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Movement of mine vehicles and machinery will be limited to demarcated routes, which will be rehabilitated when no longer in use.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		All infrastructure will be demolished in accordance to the rehabilitation plan.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		The backfilled and levelled shaft surface will be covered with stockpiled topsoil.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Soil amelioration will be conducted according to soil analyses as recommended by a soil specialist/suitable qualified person, in order to correct the pH and nutritional status before re-vegetation.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Implementation of a closure/ rehabilitation plan.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		The footprint will then be re-vegetated with a grass seed mixture as soon as possible in order to stabilize the soil and prevent soil loss during the rainy season.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
Pollution of surface water environment.	Surface Water.	Surface water monitoring will be conducted to observe any water quality deterioration from the mining activities.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Should the surface monitoring indicate water quality contamination, the surface water users will be informed of the outcomes and Zibulo Colliery to investigate and identify action plans to remediate the impact.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		The infrastructural areas will be rehabilitated to be free draining.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Existing roads will be used where possible and new disturbed areas should be minimised.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		All equipment's, machinery will be well maintained to ensure that hydrocarbon spills are minimised.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.

Groundwater contamination.	Groundwater.	If it is found that the streams/river are negatively affected by pollution from the underground workings, measures to intercept polluted seepage water will be investigated. Should it be determined that groundwater supply to users are affected by the pollution from the workings, the Compensation investigations will be conducted.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Implement as many closure measures during the operational phase, while conducting appropriate monitoring programmes to demonstrate actual performance of the various management actions during the life of mine.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		The PCD is removed post mine closure and its respective footprint areas rehabilitated (top soiling and seeding).	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		All mined areas will be flooded as soon as possible to minimise oxygen from reacting with the remaining pyrite.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
No immediate impacts on groundwater are foreseen during the decommissioning of the underground, the rebound of the water table due to cessation of pumping as well as continuing contaminant transport are longer term processes assessed in the post-mining phase		Monitoring of water levels (quarterly) within mine voids to ensure no decant to surface occurs.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		A groundwater monitoring strategy as per the recommendations of the groundwater specialist report will be implemented to monitor groundwater levels in the surrounding area. This will include monitoring of the shallow weathered aquifer water levels and water quality.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		The likelihood of decant, as well as its location and expected quality will be accurately determined at a high level of confidence and measures put in place to ensure that no decant or discharge of contaminated water occurs, unless it meets the applicable resource quality objectives (RQO's). Where the RQO's are exceeded, contaminated water will need to be treated. Where decant cannot be prevented, a water management strategy will therefore be developed and implemented on site that will ensure that water levels within the mined-out areas are actively managed post-mining so that decant is prevented and no contaminated water is discharged into the environment untreated.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Opportunities for the alternative treatment options for mine water post closure will also be investigated to reduce maintenance costs and responsibilities of water treatment post closure.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Mine design will consider the expected decant point and where possible be optimised to ensure to as far as possible prevent decant as predicted by the groundwater modelling. Where possible and if decant cannot be prevented, mine designs will target to have the decant point located outside any wetland or watercourse habitat, with sufficient space between the expected	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.

		decant point and adjacent wetlands or watercourses to allow for suitable management interventions, including potentially the passive treatment of decant.		
		A clear action plan will be developed to respond to water quality problems picked up by regular monitoring.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
Sediment runoff from the rehabilitation site may be deposited into the wetland area thereby result in the loss of wetland habitat.	Sensitive landscapes.	The site will be rehabilitated to approximate the current landscape profile and will be re-vegetated with locally occurring indigenous grasses.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		During the decommissioning and closure phase, the incline shaft will be closed and all surface infrastructures are to be removed from site.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Implement measures to manage stormwater runoff from the rehabilitated site.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		The alien vegetation management plan compiled by an ecologist during the construction/operational phase of the mine will be kept in place for several years following mine closure (minimum of five years). All species of alien invasive vegetation will be controlled and removed from site. No spread of alien vegetation into any wetlands or adjacent properties should be allowed.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		All disturbed and transformed areas will be landscaped to approximate the natural landscape profile, but should avoid steep slopes and concentrated run-off where possible.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Compacted soils will be ripped and scarified.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		The rehabilitated areas will be re- vegetated as soon as possible following completion of the earthworks to minimise erosion.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Regular long-term follow up of rehabilitated areas will be required to ensure the successful establishment of vegetation and to survey for any erosion damage on site. Erosion damage will be repaired immediately.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Sediment traps will be placed in rehabilitated areas to avoid sedimentation.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.

Air pollution from rehabilitation site.	Air Quality	Wet suppression using water carts will be conducted at areas with excessive dust emissions, which include unpaved roads. Chemical surfactants will be considered should water suppression not yield satisfactory results.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		The existing and new paved roads needed during decommissioning will be maintained, which will reduce the extent of areas that can generate dust. These roads will be rehabilitated after their use.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		The traffic volumes and speed within the shaft complex will be controlled. This will be in accordance to the safety rules of the mine.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		The farmers and community meetings conducted by the mine will be used for environmental reporting and community liaison on matters relating to the impacts on air quality.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
Visual impacts from the rehabilitation works.	Visual aspects.	All infrastructures will be removed during this phase in accordance to the rehabilitation plan.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
Increased noise levels.	Noise aspects.	The ECO will keep continuous communication with receptors R1 – R8 regarding noises and potential loud noise events.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		A contact line will be made available to receptors should a valid noise complaint arise whereby receptors could lodge a complaint (and documented). Should a valid noise complaint be lodged, it is advised that the ECO contact an acoustical consultant with experience in noise monitoring to evaluate the complaint.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Onsite noise measurements will be considered on a frequent basis, to help identify any fault or loud equipment that may require enclosures or maintenance. It will be conducted at a frequency determined by the project team or environmental coordinator.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Annual noise measurements will be conducted at receptor R2 – R8. The Environmental measurements should be conducted at I&AP's i.e. farmsteads, receptors, communities.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
Damage or destruction of sites with archaeological and cultural significance.	Sites of archaeological and cultural importance.	The rehabilitation activities will be undertaken such that it is away from the identified grave site. The fence around the graves within the mining area will be maintained in good order and access to the grave yards will be made available to the family of the deceased.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.

Impacts on employment	Socioeconomic aspects.	Transfer and redeploy employees and contractors wherever possible. Implement non-mining related skills development programmes for employees and family members through the SLP throughout the life of mine to enable retrenched employees to seek alternative employment or start income-generating businesses.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
AFTER CLOSURE PHASE				
Groundwater seepage into the underground mine voids is no longer abstracted, and the water levels start to re-bound, filling up the mine void itself as well as the previous cone of dewatering. In other words, the previous impacts on water-levels and flow directions associated with the mine dewatering will start to dissipate and water levels similar to pre-mining conditions will be re- established. However, since the underground mine voids are now highly permeable flow paths, which will equilibrate the water levels across their extent, slightly altered water levels in comparison to the pre-mining water levels will be established within the deeper fractured Karoo aquifer, while only insignificant impacts on water levels within the weathered aquifer are foreseen once they have rebound.	Groundwater.	Monitoring of water levels (quarterly) within mine voids to ensure no decant to surface occurs.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Adaptive Management of mine water levels will environmentally critical water levels be breached, i.e. decant to surface.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Monitoring of water qualities (quarterly for 5 years, thereafter annually until stabilised) within mine voids and overlying aquifer, on quarterly basis.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Adaptive Management of mine water levels will environmentally critical water levels be breached, i.e. “decant” to weathered Karoo aquifer.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Should mine water enter the shallow Karoo aquifer, hydraulic plume containment will be initiated.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		The mine will ensure that any exploration borehole within the mine lease area is properly sealed to prevent vertical flow paths to surface based on best practice. Similarly, the shafts should be sealed to prevent surface water and minimise oxygen ingress. Prior the installation of a seal adequate monitoring equipment within the underground mine workings will be installed to monitor the rate of flooding and quality of water within the flooded mine voids.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Mine design will consider the expected decant point and, where possible, will alter the mine plan to have the decant point located outside any wetland or watercourse habitat, with sufficient space between the expected decant point and adjacent wetlands or watercourses to allow for suitable management interventions.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		The numerical model will be updated biennially post closure for 20 years to increase the confidence in the post closure predictions.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.

The groundwater study has indicated that decant might occur from the underground workings in form of diffuse seepage. The decant water quality is likely to be poor and will contaminate the Leeuwfonteinspruit, the Leeuwfonteinspruit tributary and the Wilge River. The water quality is likely to remain poor in the long term (>20 years). Eventually as pollutants are leached out of the workings and if stratification occurs, the seepage water quality will improve.	Surface Water	Anglo American have specific decant management procedures and standards, outlined in their “long term commitment” plan. These standards and procedures will be employed to mitigate the effects of future decant. The intention of the mitigation will be to either stop the decant, improve the decant water quality to discharge standards agreed to by the appropriate catchment management agency or the Department of Water and Sanitation, or reduce decant to acceptable volumes agreed to by the appropriate catchment management agency or the Department of Water and Sanitation.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.
		Methods to improve the decant water quality could include flooding of the mining areas, where practical, to reduce oxygen ingress. Routing seepage through lime pits can also improve the water quality if the flows are low enough.	N/A	Condition does not apply to current activities of the Zibulo North Shaft Project as construction is underway. Construction commenced in May 2023. This condition will be audited when the operational phase commences.

5. Deliberations

The Zibulo North Shaft Project's IEA and approved EMPr were not only assessed for the compliance towards the commitments of the respective IEA and EMPr, but also assessed for the ability of the measures contained in the IEA and EMPr to sufficiently provide for the avoidance, management and mitigation of environmental impacts associated with the undertaking of the project activities.

5.1. Zibulo North Shaft Project IEA

5.1.1 Effectiveness of the IEA

Based on the assessment of the EMPr, we are of the opinion that the IEA sufficiently provides for the avoidance, management and mitigation of environmental impacts associated with the operation of the Zibulo North Shaft Project. However, there are two conditions that might need revision and these are:

- IEA Condition 8.2.1.11 (b): Construction activities must be limited to normal working hours (06h00 – 18h00).
- IEA Condition 8.2.1.10 (a): All construction equipment and vehicles must be cleaned before entering and leaving the site to reduce the chances of spreading weeds and invasive species.

5.1.2 Recommendations for IEA amendment

Based on the above, an IEA amendment should be considered by the Holder of Authorisation.

5.2. Zibulo North Shaft Project EMPr

5.2.1 Effectiveness of the IEA

Based on the assessment of the EMPr, we are of the opinion that the EMPr sufficiently provides for the avoidance, management and mitigation of environmental impacts associated with the operation of the Zibulo North Shaft Project. Further to that, no new impacts and risks were identified as a result of undertaking the activity which was not addressed by the current EMPr.

5.2.2 Recommendations for IEA amendment

No EMPr amendment is recommended by the auditor.

6. 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), Thungela Operations (Pty) Ltd, Zibulo North Shaft Project 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.

According to Regulation 34 under Part 3 of Chapter 5 of the amended Environmental Impact Assessment Regulations, 2014 (Government Notice No. 982) (EIA Regulations, 2014 as amended) state the following i.e.: *“Where the findings of the environmental audit report contemplated in subregulation 1 indicate-*

*(a) insufficient mitigation of environmental impacts associated with the undertaking of the activity; or
(b) insufficient levels of compliance with the environmental authorisation, EMPr or closure plan; the holder must, when submitting the environmental audit report to the competent authority in terms of subregulation (1), submit recommendations to amend the EMPr or closure plan in order to rectify the shortcomings identified in the environmental audit report.*

APPENDIX A: AUDIT TEAM ATTENDANCE REGISTER

NTC Group (Pty) Ltd First Floor CDH Building 1 Protea Place Sandown, Sandton, 2031		 NTC Group	
Tel: 011 462 2022 Fax: 0866 928 639 Email: ethel@ntcgroup.co.za		Enquiries:	Ethel Chifunda
		Date:	02 November 2023
		Site:	Zibulo North

THUNGELA: ZIBULO NORTH ANNUAL AUDIT

ATTENDANCE REGISTER

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APPENDIX B: PHOTOGRAPHIC EVIDENCE



Figure 3: Signage depicting direction of project site



Figure 4: D686 Main Access Road



Figure 5: Water damming near shaft construction area



Figure 6: Water damming at parking area



Figure 7: Water Bowser



Figure 8: Internal Access Road



Figure 9: Signage at Box Cut Area



Figure 10: Box Cut Area



Figure 11: Site demarcation



Figure 12: Chemical Toilets



Figure 13: Water pooling on internal access road



Figure 14: Construction of pipeline



Figure 15: PCD under construction



Figure 16: Silt Trap under Construction



Figure 17: Topsoil Stockpile



Figure 18: Alien Vegetation



Figure 19: Stores yard at Jedd Civils' Laydown Area



Figure 20: Fire Extinguisher



Figure 21: Vehicle Maintenance Slab



Figure 22: Chemical Storage at Jedd Civils' Laydown area



Figure 23: Wheelie bins at contractors laydown area



Figure 24: Wheelie Bins at Owners Team laydown area