



Mafube Coal Mining (Pty) Ltd

Environmental Audit Report

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

DMRE Reference No.:
(MP) 30/5/1/2/3/2/1 (10026) EM

MAFUBE COLLIERY

NOOITGEDACHT AND WILDFONTEIN MINING OPERATIONS

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CONTENTS PAGE

1.	INTRODUCTION	1
2.	LEGAL FRAMEWORK	2
2.1.	National Environmental Management Act, 1998 (act 107 of 1998), as amended ("NEMA")	2
3.	SCOPE AND PURPOSE OF THE ENVIRONMENTAL AUDIT	2
4.	METHODOLOGY ADOPTED IN PREPARING THE ENVIRONMENTAL AUDIT REPORT AND DECLARATION OF INDEPENDENCE	3
4.1.	Audit Team	3
4.1	Frequency of reporting	5
4.2	Period that applies to this compliance assessment	5
4.3	Procedure used during the compliance assessment	5
4.4	Evaluation criteria used during the compliance assessment	6
4.5	Rating of findings.....	6
5	ASSUMPTIONS, UNCERTAINTIES AND GAPS IN KNOWLEDGE	7
6	EMPR RECOMMENDATION REPORT	7
7	RESULTS OF THE ENVIRONMENTAL AUDIT	7
7.1	Mafube Colliery Nooitgedacht and Wildfontein coal reserve's EMPr Amendment (DMRE Reference number: MP 30/5/1/2/2 (10026) MR).....	9
7.2	Environmental Authorisation for the Amendment of the approved EMPr to be aligned with the Water Use Licence, the construction of the approved EMPr approved access road running parallel to the conveyor belt and the use of such road for mining purpose only and the amendment of the infrastructure plan contained in the approved EMPr (Ref: (MP) 30/5/1/2/3/2/1 (10026) EM approved in July 2020.	27
8	DELIBERATIONS.....	35
8.1	Adequacy and Compliance with the Mafube Colliery Nooitgedacht and Wildfontein coal reserve's EMPr.....	35
8.1.1	Adequacy of the EMPr	35
8.1.2	Compliance with the EMPr	35
8.2	Compliance with the Environmental Authorization.....	36
8.2.1	Mafube Colliery Nooitgedacht and Wildfontein coal reserve's Environmental authorisation	36
9	CONCLUSION	36
10	DISCLAIMER	36

1. INTRODUCTION

Mafube Coal Mining (Pty) Ltd (**Mafube Colliery**) is a Joint Venture between Anglo American Thermal Coal (“**AATC**”) and Exxaro Coal Mpumalanga (Pty) Ltd (**Exxaro**). The Mafube Colliery Nooitgedacht and Wildfontein coal reserves are located approximately 37 km east of the town of Middelburg via R104 regional road and 45 km west of Belfast, in the Mpumalanga Province. Mafube Colliery Nooitgedacht and Wildfontein coal reserves are existing opencast mining operations situated on certain portions of the farms Roodepoort 418 JS, Nooitgedacht 417 JS, Springboklaagte 416 JS and Patattafontein 412 JS within the Magisterial District of Nkangala, Mpumalanga Province.

Mafube Colliery Nooitgedacht and Wildfontein mining sections are operating under a mining right (MP 30/5/1/2/2/10026 MR) granted in terms of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002) (MPRDA) and an Environmental Management Programme Report (EMPr) approved in terms of the now repealed Section 39 (6) of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002).

An Environmental Audit was conducted for Nooitgedacht and Wildfontein coal reserves EMPr in 2019 in accordance with Regulation 34 of the Environmental Impact Assessment (EIA) Regulations, 2014, (as amended) in order to determine Mafube Colliery’s compliance of the operations with the conditions of the environmental authorisation and commitments of the approved EMPr. According to the findings of the 2019 environmental audit, shortcomings were identified in relation to the approved EMPr and recommendations were made to amend the approved EMPr to address the following:

- Inclusion of the Wildfontein (Hlagisa) mining and water management arrangements;
- Private maintenance road instead of public maintenance road (the change of the infrastructure is that in the current detailed designs of the proposed public access road running parallel to the conveyor route, allowing access to the operational activities, will be constructed as a private gravel road (for use by Mafube Colliery only) instead of a public road) and
- Inclusion of detailed infrastructure layout plans in the initial EMPr and updated impacts and associated management measures related to wetland management.

In accordance with the above recommendations, the approved EMPr was amended to address the shortcomings. The amended EMPr was approved in terms of the National Environmental Management Act, 1998 (**NEMA**).

In addition to the above-mentioned approved amended EMPr, Mafube Colliery Nooitgedacht and Wildfontein coal reserves have also been granted an Environmental Authorisation (**EA**) in terms of NEMA (reference MP 30/5/2/3/2/1 (100026) EM). This EA was approved in July 2020 by the DMRE.

In terms of NEMA, and the Environmental Impact Assessment Regulations, 2014, Mafube Colliery must, on an annual basis, assess its compliance with the conditions of the approved EA and EMPr for its mining and associated activities at the Mafube Colliery Nooitgedacht and Wildfontein coal reserves.

Mafube Colliery has appointed Geovicon Environmental (Pty) Ltd (**Geovicon**) to assess the compliance of Mafube Colliery Nooitgedacht and Wildfontein coal reserves’ mining operations against conditions/commitments of the approved EA and EMPr. This report is hereby submitted to the competent authority and the I&AP’s.

2. LEGAL FRAMEWORK

2.1. NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT 107 OF 1998), AS AMENDED

Section 24N(7)(d) of NEMA requires that the holder and any person issued with an EMPr must monitor and audit compliance with the requirements of such EMPr. Regulation 34 of the EIA Regulations, 2014 states that the holder of an EA must, for the period during which the EA and EMPr remain valid, ensure that compliance with the conditions of the EA and the commitments of the approved EMPr are audited and that an environmental audit report, prepared by an independent person, is submitted to the relevant competent authority, which in the case of Mafube Colliery is the DMRE, Mpumalanga Regional Office. The above-mentioned environmental audit report must determine the ability of the approved EA and/or EMPr to sufficiently provide for the avoidance, management and mitigation of environmental impacts associated with the mining operation on an ongoing basis and the level of compliance with the provisions of EA and the approved EMPr.

Therefore, the requirements of regulation 34(1) of the amended EIA Regulations, 2014 are relevant to the Mafube Colliery Nooitgedacht and Wildfontein coal reserves' operations.

3. SCOPE AND PURPOSE OF THE ENVIRONMENTAL AUDIT

The purpose of this assessment is to undertake an audit in terms of section 34 of NEMA in respect of the mine's compliance with the following approved EA and EMPr –

- **EMPr:**
 - Mafube Colliery Nooitgedacht and Wildfontein coal reserve's EMPr Amendment (DMRE Reference number: MP 30/5/1/2/2/10026 MR) approved on 3 July 2020.
- **EA:**
 - Amended EA to align the approved EMPr with the Integrated Water Use Licence for Wildfontein Mining Area, the construction of the approved EMPr approved access road running parallel to the conveyor belt and the use of such road for mining purpose only and the amendment of the infrastructure plan contained in the approved EMPr (Ref: MP 30/5/1/2/3/2/1 (10026) EM) approved on the 3 July 2020.

Copies of any of these documents are available on request.

The environmental audit was conducted to determine the level of performance against compliance of the mining operations with the provisions of the approved EA and EMPr. The audit was conducted to further determine the ability of the measures contained in the approved EA and EMPr to sufficiently provide for the avoidance, management and mitigation of environmental impacts associated with Nooitgedacht and Wildfontein coal reserves and associated surface infrastructure and activities.

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

- To report on the compliance of the mine with the conditions, commitments and/or mitigation measures in the approved EMPr and EA and the extent to which the avoidance, management and mitigation measures provided for in the approved EMPr and EA, achieve the objectives and outcomes of the approved EMPr and EA.
- To identify and assess any new impacts and risks arising from the Mafube Colliery's mining activities which are not adequately mitigated by the mitigation measures in the approved EMPr and EA;
- To evaluate the effectiveness of the approved EMPr and EA;
- To identify any inadequacies in the approved EMPr and EA; and
- To identify the need for any changes to the avoidance, management and mitigation measures provided for in the approved EMPr and EA.

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

4.1. AUDIT TEAM

Auditor 1: Mr. Ornassis Tshepo Shakwane (Pr.Sci.Nat. & Registered EAP)

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Experience of the Auditor

Mr. O.T. Shakwane obtained his BSc (Microbiology and Biochemistry) from the University of Durban Westville in 1994, and completed his honours degree in Microbiology in 1995. Mr O.T. Shakwane has also completed short courses on environmental law, environmental impact assessment, environmental risk assessment and environmental management systems with a number of tertiary institutions. He has worked within the three state departments tasked with mining and environmental management i.e. Department of Water and Sanitation (Gauteng and Mpumalanga Region), Department of Mineral Resources (Mpumalanga Region) and Department of Agriculture, Conservation and Environment

(Gauteng Region). Mr. Shakwane has been in the consulting field since 2004 and has undertaken environmental audits for mining operations similar to Mafube Colliery Nooitgedacht and Wildfontein coal reserves. Mr. Shakwane is one of the auditors that audited Mafube Colliery Nooitgedacht and Wildfontein coal reserve's compliance with their EA and EMPr. Mr. Shakwane has been involved in the field of environmental auditing for the past sixteen years.

He is registered with the Environmental Assessment Practitioners Association of South Africa and South African Council for Natural Scientific Professions as an Environmental Assessment Practitioner and a Professional Natural Scientist in terms of section 24H of the National Environmental Management Act, (Act 107 of 1998) and section 20(3) of the Natural Scientific Professions Act, 2003 (Act 27 of 2003), respectively. He is also a member of the International Association for Impact Assessment, South Africa.

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

Auditor 2: Miss Mamphedi Bathabile Mabogoane

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Experience of the Auditor

Ms. Bathabile Mabogoane obtained her Baccalaureus Technologiae (B-Tech) in Environmental Sciences at the Tshwane University of Technology in 2020. She started working as an intern at Shangoni Management Services, year 2017 specializing in conducting Waste Management Licence Audits, waste management related reports and Health, Safety and Environmental related aspects and Environmental related reports. She joined Geovicon Environmental (Pty) Ltd as a Junior Environmental Consultant in August 2018 and now appointed as an Environmental Consultant. Her responsibilities include but will be limited to: compilation of all documentation for mining rights, mining permits and prospecting right applications, compilation of Environmental Impact Assessment and Environmental Management Programs, compilation of Water Use Licence applications with Integrated Water and

Waste Management Plans, conducting of Environmental audits, Integrated Water Use Licence Audits, conducting of Environmental inspections, compilation of environmental reports (EMPr, Scoping Reports, BARs, EIAs, Public Participation Reports), arrangement and attendance of Public Participation meetings with Interested and Affected Parties, compilation of Water Quality Reports and Environmental Audit Reports (EAR). She is also a member of the International Association for Impact Assessment, South Africa. Ms. Bathabile Mabogoane has been in the consulting field for a period of four years and has undertaken environmental audits for mining operations similar to Mafube Colliery Nooitgedacht and Wildfontein coal reserves. Ms. Bathabile Mabogoane is one of the independent auditors that audited Mafube Colliery Nooitgedacht and Wildfontein coal reserves compliance with their EA and Approved EMPr.

4.1 FREQUENCY OF REPORTING

Mafube Colliery Nooitgedacht and Wildfontein coal reserves are operated under the approved EMPr and EA issued in terms of NEMA. The approved EA specifies the auditing frequency as annually. In terms of regulation 34(2)(d) of the EIA Regulations, 2014 *“the environmental audit report contemplated in sub-regulation (1) must be conducted and submitted to the competent authority at intervals as indicated in the Environmental Authorisation”*. In view of the above and since the authorisation comply with the requirements of regulation 26 (e) of the NEMA EIA Regulations which requires an EA to specify the frequency of auditing of compliance with the conditions of the EA and compliance with the approved EMPr, the auditing interval is therefore annually.

4.2 PERIOD THAT APPLIES TO THIS COMPLIANCE ASSESSMENT

The audit review period for this environmental audit report is July 2020 to June 2021.

4.3 PROCEDURE USED DURING THE COMPLIANCE ASSESSMENT

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

- Desktop assessment of the Mafube Colliery Nooitgedacht and Wildfontein coal reserves' approved EMPr and EA. The desktop assessment was used to list all commitments and conditions indicated in the approved EMPr and EA. Also as part of the desktop assessment, we had access to previous audit reports in order to establish the “direction of travel” where possible (i.e. has the mine progressed or regressed in its compliance status).
- The Environmental Audit was conducted by reviewing and abstracting the commitments (management and mitigation measures) from the approved EMPr and conditions from the approved EA. In cases where the commitments had not been fulfilled, such has been indicated in this report. As described further below, we also had extensive electronic interviews with the relevant Mafube Colliery personnel. These interviews were held over a period of three days.
- To assess the compliance with the conditions and commitments of the approved EA and EMPr and to reach our findings, we conducted extensive interview with Mafube Colliery site personnel. We also reviewed comprehensive documentation, which was provided by Mafube Colliery on a collaboration platform.

- A site visit was scheduled and undertaken on the 24 - 25 of June 2021 to confirm the state of compliance of the Mafube Colliery.
- In addition to assessing the compliance with the approved EMPr commitments and EA conditions, the adequacy of the information was also assessed through evaluating activities and verifying such against the descriptions and risk assessments provided in the approved EMPr and EA, and whether location specific risks and the necessary specialist assessments had been considered.

4.4 EVALUATION CRITERIA USED DURING THE COMPLIANCE ASSESSMENT

Evaluation criteria used during the compliance assessment include the following:

- Are the measures and structures as indicated in the approved EMPr and EA in place?
- Are the measures adequate and structures maintained, and at what frequency are they maintained?
- Has the monitoring as indicated in the approved EMPr and EA been conducted? (i.e. data and reports provided).
- Is the reported frequency of the monitoring in accordance with the approved EMPr and EA? (i.e. assessed using reports provided).
- Determining whether any new measures are required to prevent or mitigate the existing environmental impacts and/or other potential impacts.

Evaluation of the appropriateness and adequacy of the approved EMPr and EA included the following:

- Compliance with relevant laws pertaining to the environment.
- Compliance of mining and associated activities with the approved EMPr and EA (i.e. is the mine conducting activities that are not indicated or provided for or approved in the approved EMPr and/or EA?)

4.5 RATING OF FINDINGS

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

Compliance category	Findings
Condition/mitigation measure/commitment has been achieved with evidence provided in the form of a document.	Compliant
The operation failed to comply with, or satisfy the requirements of an applicable condition, commitment and/or mitigation measure. Non-compliances include instances where although the current condition or mitigation measure has been achieved, there have been new impacts and risks arising from the activity; whether the current measures are effective and whether there are any shortcomings	Non-Compliant

Compliance category	Findings
which need to be address through changes in the systems or amendment of the EMPr.	
<p>This means:</p> <ul style="list-style-type: none"> The condition, commitment and/or mitigation measure is Not Applicable. A “Not Applicable” finding is also noted in events where such condition, commitment and/or mitigation measure is either obsolete, an alternative effective measure is utilised or the commitment and/or mitigation measure is not yet relevant but is still relevant for future activities. 	Not Applicable
The condition, commitment and/or mitigation measure that does not require any specific action.	Noted

5 ASSUMPTIONS, UNCERTAINTIES AND GAPS IN KNOWLEDGE

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

6 EMPr RECOMMENDATION REPORT

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

Where findings of the Environmental Audit Report indicate:

- insufficient mitigation of environmental impacts associated with the undertaking of activity;
- insufficient levels of compliance with the EA or Approved EMPr and closure plan;

the holder must when submitting the environmental audit report to the competent authority in terms of sub regulation (1) of the EIA Regulations, 2014, submit recommendations to amend the EA, EMPr or closure plan in order to rectify shortcomings identified in the environmental audit report and such recommendations must have been subjected to a public participation process as agreed to by the competent authority.

Based on the findings of the audit, no recommendation is proposed.

7 RESULTS OF THE ENVIRONMENTAL AUDIT

The results of the Environmental Audit are given in the Tables below. The tables below outlines the EMPr and the EA of the authorised activities at Mafube Colliery Nooitgedacht and Wildfontein coal reserves.

7.1 MAFUBE COLLIERY NOOITGEDACHT AND WILDFONTEIN COAL RESERVE'S EMPR AMENDMENT (DMRE REFERENCE NUMBER: MP 30/5/1/2/2 (10026) MR)

REF NO ASPECT (OF SERVICE OR PRODUCT)	POTENTIAL IMPACTS OBJECTIVES	MITIGATION MEASURE(S)	FINDINGS	OBSERVATIONS/AUDIT EVIDENCE
CONSTRUCTION PHASE				
Air Quality	Dust generation due to vehicle entrainment, land clearing, topsoil removal, blasting, material loading, hauling, stockpiling, grading, bulldozing and compaction.	Wet suppression of dust on haul and dirt roads within the mine footprint.	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction related activities are undertaken, therefore this EMPr commitment is not applicable.
		Early tarring of the mine owner access road.	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction related activities are undertaken, therefore this EMPr commitment is not applicable.
		Restrict traffic to designated roads.	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction related activities are undertaken, therefore this EMPr commitment is not applicable.
		Enforce 40 km/h speed limits within mining areas.	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction related activities are undertaken, therefore this EMPr commitment is not applicable.
		Phasing of earthmoving activities to reduce source size and maintain vegetation cover for as long as possible;	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no earthmoving construction related activities are undertaken, therefore this EMPr commitment is not applicable.
		Regular watering (with water trucks) to ensure effective dust suppression in areas where materials removal, placement or manipulation is occurring.	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction related activities are undertaken, therefore this EMPr commitment is not applicable.
		Early vegetation and stabilization of idle stockpiles and berms.	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction related activities are undertaken, therefore this EMPr commitment is not applicable.
		Minimise extent of open areas and frequency of disturbance.	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction related activities are undertaken, therefore this EMPr commitment is not applicable.
Terrestrial Ecology	Habitat Loss and degradation through vegetation clearance.	Minimise necessary vegetation clearing and ecological disturbance by proper planning and demarcation.	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction related activities are undertaken, therefore this EMPr commitment is not applicable.
		A suitably qualified botanist will conduct a thorough examination of all areas of natural vegetation within the mining and surface infrastructure boundary, before site establishment commences, and mark out threatened plants for relocation. The botanist should be familiar with the target threatened and protected species and the relevant habitats in which they may occur. The most appropriate time to conduct the examination would be when the plants are in flower. The following actions will be undertaken for any threatened/protected plants specimens found:	Compliant	Golder Associates (Pty) Limited (Ecology Division) was appointed as the suitably qualified botanist for examination of all areas of natural vegetation within the mining and surface infrastructure boundary of Nooitgedacht & Wildfontein Opencast Coal Mine. According to the Terrestrial Ecology Study (dated July 2012), threatened plants species were identified, however no relocation was required. The study also identified threatened and protected species that may potentially occur and the relevant habitats within the mining right area.
		The locality of the specimens will be mapped and notes made on the microenvironment in which the specimen is located.	Not Applicable	According to the Terrestrial Ecology Study (dated July 2012) compiled for Nooitgedacht & Wildfontein Opencast Coal Mine, maps indicating the co-ordinates of the species identified has been mapped together with the photographic evidence and the microenvironment in which they occur. This EMPr commitment is however no longer applicable since the study and the mapping of the species found were undertaken before commencement of the project activities.
		A co-ordinate reading of the site will be taken using a Global Positioning System (GPS) so that the site can be found at a later stage if necessary.	Not Applicable	According to the Terrestrial Ecology Study (July 2012) compiled for Nooitgedacht & Wildfontein Opencast Coal Mine, GPS coordinates are included as part of the maps indicating the identified threatened/protected plants specimens. This EMPr commitment is however no longer applicable since the study and the mapping of the species found were undertaken before commencement of the project activities.
		The Botanist must apply for all the necessary permits to relocate species before relocation can commence.	Not Applicable	The specialist proposed no relocation of the threatened/protected plants specimens. No relocation hence took place before the commencement of the Nooitgedacht & Wildfontein activities. Therefore, this EMPr commitment is not applicable.

REF NO ASPECT (OF SERVICE OR PRODUCT)	POTENTIAL IMPACTS OBJECTIVES	MITIGATION MEASURE(S)	FINDINGS	OBSERVATIONS/AUDIT EVIDENCE
		After the necessary permit have been obtained, the plants can be removed and transplanted in designated areas.	Not Applicable	The specialist proposed no relocation of the threatened/protected plants specimens. No relocation hence took place before the commencement of the Nooitgedacht & Wildfontein activities. Therefore, this EMPr commitment is not applicable.
		Limit height of topsoil stockpiles to 4 metres to prevent compaction and sterilisation of seedbeds; and	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction related activities are undertaken, therefore this EMPr commitment is not applicable.
		Revegetate disturbed areas where construction activities have ceased.	Not Applicable	All areas disturbed as a result of the construction activities have been vegetated. Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction related activities are undertaken, therefore this EMPr commitment is not applicable.
	Habitat fragmentation.	Where possible, route linear infrastructure through already disturbed areas and across narrowest parts of wetlands and other sensitive areas.	Compliant	The conveyor, LDV road, dirty water powerline, bridge and the haul road are situated in areas, which were dominated by farming activities. This was confirmed through the Google Earth image.
		When crossing wetlands and watercourses, raise infrastructure above ground level and minimise footprint of foundation structures to comply with all measures in the IWULA.	Compliant	All stream and wetland crossing infrastructures are constructed above ground level and no unnecessary disturbance apart from the approved areas was noted on the Google Earth Imagery.
		Provide culverts under roads to assist Faunal mobility.	Compliant	It was confirmed during the site visit that culverts are provided under the road and conveyor crossings within the Nooitgedacht mining area to assist with faunal mobility. It must be noted that no road crossings are located within the Wildfontein Mining area.
	Increases in exotic and/or declared invader species of flora and fauna	Avoid unnecessary ground clearing, which promotes colonisation.	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction related activities are undertaken, therefore this EMPr commitment is not applicable.
		Develop, implement and monitor an exotic/invader species control programme.	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction related activities are undertaken, therefore this EMPr commitment is not applicable.
	Loss of species of conservation importance.	An active list with a key (identification pictures) of the latest threatened Red Data flora species expected to occur in the active mining area, is to be compiled, reviewed and regularly updated in order to assist the ECO with the task of monitoring the area for possible threatened Red Data flora species which were not observed/ recorded during the latest ecological assessment undertaken for the project.	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction related activities are undertaken, therefore this EMPr commitment is not applicable.
		If threatened red data species are recorded during future monitoring activities, a vegetation specialist to be consulted to assess the best approach to deal with the observed species, possibly by relocation if required.	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction related activities are undertaken, therefore this EMPr commitment is not applicable.
	Injuries or death due to fauna-Human interaction.	Enforce 40 km/h speed limits within mining areas.	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction related activities are undertaken, therefore this EMPr commitment is not applicable.
		Strict prohibition of trapping, poaching, poisoning and killing of on-site fauna.	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction related activities are undertaken, therefore this EMPr commitment is not applicable.
		Communicate rules regarding protection of fauna to all Mafube employees and contractors.	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction related activities are undertaken, therefore this EMPr commitment is not applicable.
		Where possible remove traps from game trails.	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction related activities are undertaken, therefore this EMPr commitment is not applicable.

REF NO ASPECT (OF SERVICE OR PRODUCT)	POTENTIAL IMPACTS OBJECTIVES	MITIGATION MEASURE(S)	FINDINGS	OBSERVATIONS/AUDIT EVIDENCE
Aquatic ecology	<ul style="list-style-type: none"> Pollution of surface water; and Reduced flow and siltation of water bodies would reduce quality of aquatic habitat and reduce ecosystem functionality. 	All construction roads and supporting infrastructure in or adjacent to the riparian zone shall be minimized where appropriate.	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction related activities are undertaken, therefore this EMPr commitment is not applicable.
		Comply with the requirements of the IWULA at all times.	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction related activities are undertaken, therefore this EMPr commitment is not applicable.
		And, if required, shall be aligned and managed so as to minimize disturbance and to ensure uninterrupted flow above and below infrastructure which crosses the riparian zone and in-stream habitats.	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction related activities are undertaken, therefore this EMPr commitment is not applicable.
		Erosion control and protection measures installed as part of the construction of the project will be adapted for the specific area and situation should signs of erosion appear;	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction related activities are undertaken, therefore this EMPr commitment is not applicable.
		Rehabilitate eroded areas as soon as possible.	Not Applicable	No eroded areas were noted during the site visit, therefore this EMPr commitment is not applicable.
		Where possible, use existing access roads to the proposed mining areas;	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction related activities are undertaken, therefore this EMPr commitment is not applicable.
		Place spoil heaps and overburden in areas where erosion and sedimentation of water courses will be minimised.	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction activities are undertaken, therefore this EMPr commitment is not applicable.
Wetland ecology	Pollution of water of wetlands, siltation and reduction in flow would reduce quality of habitat and would reduce wetland functionality.	Schedule construction work to take place in dry season where possible.	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction activities are undertaken, therefore this EMPr commitment is not applicable.
		Prevent polluted water from entering the wetland ecosystems by implementing the dirty and clean water separation berms before the start of construction.	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction activities are undertaken, therefore this EMPr commitment is not applicable.
		All non-mining wastes will be stored away from wetland and pan areas and drainage lines feeding into them, and disposed of off-site and as required by legislation.	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction activities are undertaken, therefore this EMPr commitment is not applicable.
		All vehicle and storage yards/lay down areas will be sited away from wetlands and pans and drainage lines feeding into them, unless being provided for in the IWULA.	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction activities are undertaken, therefore this EMPr commitment is not applicable.
		Equipment will be properly maintained to prevent oils and fuels from accidentally entering the aquatic ecosystems.	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction activities are undertaken, therefore this EMPr commitment is not applicable.
		Prohibit water uses associated with wetlands other than those permitted in the WULA without the necessary authorisations/ amendments being in place.	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction activities are undertaken, therefore this EMPr commitment is not applicable.
Geochemistry	Acid generation at overburden dumps and box cuts.	Confirmatory monitoring of ARD development at overburden dumps from the first box cuts will be done for two years where after the monitoring programme will be revised as part of the ARD management plan.	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction activities are undertaken, therefore this EMPr commitment is not applicable.
		This monitoring will include: Sampling of the key lithologies to determine ARD risk and availability of excess neutralising potential for ARD risk reduction.	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction activities are undertaken, therefore this EMPr commitment is not applicable.
		Analysis of samples for standard Acid Base Accounting.	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction activities are undertaken, therefore this EMPr commitment is not applicable.
		Databasing of results, preferably in the geological model.	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction activities are undertaken, therefore this EMPr commitment is not applicable.
		Water quality monitoring (in addition to standard pit water quality and water reticulation monitoring) of seepage from spoils area, significant groundwater inflows and standing pit water.	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction activities are undertaken, therefore this EMPr commitment is not applicable.

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		The above monitoring data is critical to update the pit salt balance and future geochemical modelling work (long term post closure) predictions.	Noted	The condition is well understood by Mafube Colliery Management.
Heritage	Damage to or destruction historical farmsteads, rural dwellings, grave yards or items of archaeological importance.	No historical structure will be demolished without authorisation from SAHRA has been obtained and after an investigation by an appropriately qualified historical architect or ethnographer has been completed.	Not Applicable	Although farmstead complexes with farmhouses and outbuildings, which are older than sixty years, were discovered during the Heritage Impact Assessment Study (dated May 2012) complied for Nooitgedacht and Wildfontein Reserves, no relocation of these historical structures was proposed.
		No grave will be relocated without having followed the regulated procedures under the guidance of a qualified forensic archaeologist or reputable undertaker;	Not Applicable	According to the Heritage Impact Assessment Study (dated May 2012) complied for Nooitgedacht and Wildfontein Reserves, a number of formal and informal graveyards were identified. However, no grave relocation was undertaken.
		Graves that do not require relocation will be fenced off, with safe and controlled access for any relatives or friends who wish to visit the deceased; and	Compliant	The identified graves are fenced off. This was confirmed during the site visit.
		If any potential heritage resources or human remains are unearthed during construction, the site will be demarcated and access restricted. An archaeologist will then be commissioned to visit the site in and advise on further steps to be taken.	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction activities are undertaken, therefore this EMPr commitment is not applicable.
Noise	Irritation, sleep interference and potential health impacts.	Engage with potentially sensitive receptors, keep them informed and keep a complaints register;	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction activities are undertaken, therefore this EMPr commitment is not applicable.
		Where necessary, undertake noise measurements at complainants' locations;	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction activities are undertaken, therefore this EMPr commitment is not applicable.
		Implement and maintain noise abatement equipment on construction machinery;	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction activities are undertaken, therefore this EMPr commitment is not applicable.
		Where practicable, construct earthen berms between noisy activities and sensitive receptors;	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction activities are undertaken, therefore this EMPr commitment is not applicable.
		Machines in intermittent use will be shut down in the intervening periods between work or throttled down to a minimum.	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction activities are undertaken, therefore this EMPr commitment is not applicable.
		In general, operations must meet the noise standard requirements of the Occupational Health and Safety Act (Act No 85 of 1993) and.	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction activities are undertaken, therefore this EMPr commitment is not applicable.
		Construction staff working in areas where the 8-hour ambient noise levels exceed 75dBA will be required to wear ear protection equipment.	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction activities are undertaken, therefore this EMPr commitment is not applicable.
Soils, land use and land capability	Within the footprint of the construction areas soil horizon sequences will be disturbed, the soil surface will be covered completely and current land use will cease.	Strip and store topsoil from the construction footprint in stockpiles no more than 4 m in height, to avoid compaction.	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction activities are undertaken, therefore this EMPr commitment is not applicable.
		Topsoil and subsoil stockpiles should preferably be placed in a free draining location to minimize soil erosion and possible water logging.	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction activities are undertaken, therefore this EMPr commitment is not applicable.
		Soil stockpiles should be at least 100 m away from active/future mining areas to minimize contamination from fly rock.	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction activities are undertaken, therefore this EMPr commitment is not applicable.
		If storage is to exceed 6 months, vegetate stockpile.	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction activities are undertaken, therefore this EMPr commitment is not applicable.
		The slopes of soil stockpiles must be kept to a minimum and the maximum slopes must be 1:3 in an effort to minimize soil erosion and run off.	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction activities are undertaken, therefore this EMPr commitment is not applicable.
		All alien plant species must be removed from topsoil stockpiles as soon as practically possible to prevent possible infestation and build-up of alien plant species seed bank.	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction activities are undertaken, therefore this EMPr commitment is not applicable.

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		All soil stockpiles must be surveyed to get the location of stockpile, height of stockpile (m) and the volume of topsoil (M3).	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction activities are undertaken, therefore this EMPr commitment is not applicable.
		No traffic/ vehicles / machinery is allowed on the soil stockpiles, except when they are being created and when topsoil is being replaced on rehabilitated land.	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction activities are undertaken, therefore this EMPr commitment is not applicable.
		Topsoil should only be used for its intended purposes (rehabilitation or berms) and not for mining activities (e.g. road, etc.)	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction activities are undertaken, therefore this EMPr commitment is not applicable.
		The operations must have a topsoil balance.	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction activities are undertaken, therefore this EMPr commitment is not applicable.
		Topsoil and EMPR land capability reconciliation must be done annually to ensure that commitments are going to be met.	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction activities are undertaken, therefore this EMPr commitment is not applicable.
Socio-economic	<ul style="list-style-type: none"> Physical and economic displacement; Loss of livelihood; Influx of job seekers into project area; Safety and security risks; and Work for contractors and injection of cash into local economy. 	Comprehensive engagement and consultation with all affected local residents.	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction activities are undertaken, therefore this EMPr commitment is not applicable.
		Comply with the IFC performance standards in respect of any community relocations required as a result of mining activities.	Not Applicable	No communities were relocated as a result of the Nooitgedacht and Wildfontein mining operations, therefore this EMPr commitment is not applicable.
		Comply with Extension of Security of Tenure Act (No. 62 of 1997) and the Land Reform (Labour Tenants) Act, 1996 [No. 3 of 1996] and explain consequences of legislation to farm workers and tenants.	Compliant	The Security of Tenure Act, 1997 (Act No. 62 of 1997) and the Land Reform (Labour Tenants) Act, 1996 (Act No. 3 of 1996) is communicated through the engagement forum. The minutes of the meeting were provided for review during the audit period. No pending land tenure was reported during the audit period.
		Continual and clear communicating with I&APs about the fact that this project offers very limited permanent employment opportunities.	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction activities are undertaken, therefore this EMPr commitment is not applicable.
		Mafube will update and implement their existing HSEC policy and emergency evacuation plan for employees and communities at the Nooitgedacht and Wildfontein operation in order to reduce potential safety and security risks.	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction activities are undertaken, therefore this EMPr commitment is not applicable.
Traffic	Construction vehicles and personnel carriers may cause inconvenience to local residents and increase risk of traffic accidents on local roads; and The project will cut off two district roads.	Monitor condition of construction vehicles.	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction activities are undertaken, therefore this EMPr commitment is not applicable.
		Enforce posted speed limits on construction vehicles in cooperation with traffic authorities.	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction activities are undertaken, therefore this EMPr commitment is not applicable.
		Provide alternative access routes where current ones are cut off by mining.	Not Applicable	No other access alternatives are identified for the Nooitgedacht and Wildfontein mining operations.
Visual	Degradation of existing visual quality of the area due to dust plumes, lighting, movement of construction vehicles, creation of linear infrastructure and loss of natural vegetation.	Avoid creating unnecessarily large areas of bare earth by retaining as much vegetation as possible. Ensure that as much existing natural vegetation is retained as possible and incorporated into the site design, especially on the periphery of the project area.	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction activities are undertaken, therefore this EMPr commitment is not applicable.
		Design and build conveyors to follow the natural contours of the land. Avoid extensive cut or fill areas where possible;	Compliant	According to the design plans (drawing No. 0354-0048-MED-0108), dated 2015 provided for review during the audit, it is indicated that the conveyor will flow to the natural grant profile of the preferred selected route. According to Google Earth Image, the conveyor flows through the natural contours of the land. Furthermore, the conveyor belt was constructed according to the approved plans and designs and no clearance of vegetation or disturbance outside of the approved area was undertaken.

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		Rehabilitate exposed construction areas with grasses and/or groundcover vegetation as soon as practicable.	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction activities are undertaken, therefore this EMPr commitment is not applicable.
		Apply wet suppression to minimise visible dust plumes.	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction activities are undertaken, therefore this EMPr commitment is not applicable.
		Avoid harsh, steep engineered slopes that contrast with existing topographic forms;	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction activities are undertaken, therefore this EMPr commitment is not applicable.
		Paint structures in pastel colours (e.g. olive green soft brown) to blend in with the natural environment;	Compliant	It was confirmed during the site visit that the building structures within the Nooitgedacht and Wildfontein mining operations are painted in olive green to blend in with the natural environment.
		Install light fixtures that provide precisely directed illumination to reduce light "spillage" beyond the immediate surrounds of the construction area; and	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction activities are undertaken, therefore this EMPr commitment is not applicable.
		Avoid high mast top security lighting along the periphery of the site and use motion-activated lights.	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction activities are undertaken, therefore this EMPr commitment is not applicable.
Surface water	<ul style="list-style-type: none"> Increased runoff volumes due to compaction of surfaces; Erosion and siltation of water courses due to the removal of vegetation and topsoil; Alteration of river beds and banks by construction of roads and conveyor crossings; and Pollution of surface water resources by spillage of fuel, hydraulic fluids and cement. 	Construct storm water management system and transfer dams before commencement of mining in accordance with the WUL.	Compliant	According to the Storm Water Management Plan (Polluted Storm Water Management Report) (dated May 2015) compiled by Hatch Goba (Proprietary) Limited ("Hatch"), pollution control dams, transfer dam, trenches, berms, balancing dam and a water treatment plant were constructed to contain all dirty emanating from the dirty water areas within the mining operations. All the above-mentioned water containment systems are authorised as per the WUL and all were constructed before commencement of the mining activities. This was confirmed through the assessment of the Google Earth Imagery and the completion certificate of the constructed infrastructures.
		Use impounded water for dust suppression on site and along the conveyor route.	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction activities are undertaken, therefore this EMPr commitment is not applicable.
		Impounded water must be treated and released back into the Springbokspruit system at points to be defined in the WULA. Water qualities must meet the IWULA objectives before release can take place;	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction activities are undertaken, therefore this EMPr commitment is not applicable.
		The protocols that will be applied while constructing the crossings will be developed and documented prior to construction and will address, excavation, handling excavated	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction activities are undertaken, therefore this EMPr commitment is not applicable.
		Material and extent of excavations. Engineering designs for the road and conveyor crossings must accommodate the 50 year flood peak without overtopping. The appropriate erosion protection will be provided upstream and downstream of the crossing to limit the erosion impacts of the crossing.	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction activities are undertaken, therefore this EMPr commitment is not applicable.
		During the rainy season, inspections must be done to investigate the forming of any erosion channels or rills within the mine footprint;	Not Applicable	The activities associated with the wetland crossings are completed and the road and conveyor crossing activities are currently operational, therefore this EMPr commitment is not applicable.
		Erosion channels and rills must be repaired without delay.	Not Applicable	The activities associated with the wetland crossings are completed and the road and conveyor crossing activities are currently operational, therefore this EMPr commitment is not applicable.
		Mix concrete and plaster in proper equipment, batching plant or mortar boards within the construction area to prevent the silting up of streams. No construction allowed without the appropriate clean and dirty water separation system in place.	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no construction activities are undertaken, therefore this EMPr commitment is not applicable.
		Impound water used to clean cement mixing equipment in the pollution control dam, do not discharge to the river system.	Not Applicable	Nooitgedacht and Wildfontein mining operations are currently in an operational phase and no clean cement mixing equipment are currently used, therefore this EMPr commitment is not applicable.
OPERATIONAL PHASE				
Air Quality	Continual dust generation due to blasting, material loading and hauling,	Air quality monitoring on-site and at sensitive receptors to be conducted as per the requirements of the approved Mafube Monitoring Programme.	Compliant	Nooitgedacht mining area According to the Monitoring, Audits and Review Procedure (dated March 2017), monitoring must be conducted for dust fall-out, particulate matter, noise and vibration on site and at the

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	vehicle entrainment, land clearing, topsoil removal, stockpiling, grading, bulldozing and compaction.			receptors and the results thereof must comply with the prescribed dust fall out and PM10/2.5 limits. According to the Monthly Dust Fall-out Monitoring Report (dated December 2020), all sampled single-bucket localities complied with the stipulated limits for dust-fall out and PM10/2.5. Furthermore, according to the Seismic and Acoustic Event Report (dated May 2021), ground vibration and air blast levels at the selected stations were within the required limits.
			Compliant	Wildfontein mining area The Air Quality Management Plan outline the following for air quality monitoring on-site and at sensitive receptors: <ul style="list-style-type: none"> An independent specialist must be appointed to conduct air quality monitoring and reporting on compliance with the prescribed regulation on dust fall out rates for both residential and non-residential areas on a monthly and annual basis. Routine inspections and monitoring of the dust monitoring instruments. In relation to the above-mentioned requirements, NOHS Consultant is contracted to conduct monthly and annual dust fall out monitoring at the Wildfontein mining operation. All results obtained were within the acceptable limits. All dust-monitoring instruments are inspected during the monthly monitoring period.
		Wet suppression or chemical suppression (using Dust-a-side) of dust on haul and dirt roads within the mine footprint;	Compliant	Water bowzers are used to dust suppresses the haul and dirty roads within the Nooitgedacht and Wildfontein mining operations.
		Early paving of mine owned permanent roads;	Not Applicable	An amendment application was undertaken and approved to amend this EMPr commitment to the use of gravel roads instead of paved roads. The change in the above infrastructure was detailed in the current detailed designs of the proposed public access road running parallel to the conveyor route. The access road that allows access to the operational activities has been constructed as a private gravel road (for use by Mafube Colliery only) instead of a public tarred road.
		Restrict traffic to designated roads;	Compliant	It was confirmed during the site visit that traffic is restricted to designated areas. Vehicle management plan and traffic management plan are used as a form of communication to employees and visitors on the use of designated and permitted roads. Toolbox talks are also conducted on a regular basis informing the employees and visitors of the designated and permitted roads within the mining areas.
		Enforce 40 km/h speed limits within mining areas;	Compliant	Speed limit of 20 km/h is enforced within the opencast mining areas and speed limit of 40 km/h within the infrastructural areas. This was confirmed during the site visit.
		Early vegetation, stabilization of stockpiles and disturbed soil; and	Compliant	Hydro-mulch is appointed as the responsible personnel for the revegetation of stockpiles and on disturbed areas within the Nooitgedacht & Wildfontein Opencast Coal Mining operations. According to a report compiled by Hydro-mulch (dated 22nd of June 2020 to 10th of July 2020), the following disturbed areas were indicated where seeding is still to be undertaken: <ul style="list-style-type: none"> Embankments on the railway line crossing along Nooitgedacht access road Embankments on the culvert bridge along Nooitgedacht access road Erosion at the Pollution Control Dam (PCD) Eroded areas for the outstanding work at Mafube Colliery (Nooitgedacht Section) were filled with topsoil in preparation for seeding which will be undertaken during the summer season, as indicated in the report. It is our opinion that the any idling stockpiles and berms within the mining site would have been revegetated and are in a stable state since the vegetation of stockpiles did not form part of the report compiled by Hydro-mulch (dated 22nd of June 2020 to 10th of July 2020).
		Minimise extent of open areas and frequency of disturbance.	Compliant	According to the Google Earth Imagery in comparison with the approved layout plans, all authorised activities are undertaken within the approved footprint areas and no unnecessary disturbance apart from the approved areas was noted.
Aquatic and wetland ecology	<ul style="list-style-type: none"> Total loss of wetland areas that will be mined; Pollution of surface water due 	Confine mining of wetlands to those areas that are indicated on the mining plans that have been approved by the DMR and which have been approved in the WULA.	Compliant	It was confirmed through the assessment of the Wetland Baseline Study and Impact Assessment (dated March 2012), Google Earth Imagery, approved layout plan and the site visit conducted, that no activities are undertaken within wetland areas without approval from the DMRE and DWS. According to the approved mining layout plan and the water uses approved as part of the water use licences, the following activities will be/are undertaken within wetland areas:

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	<ul style="list-style-type: none"> to litter and dumping; Spillage of process water, harmful or toxic substances; Contamination of ground- and surface water resources as a result of mining and associated activities affecting water quality and with it biodiversity and ecosystem functioning; and Reduction in numbers and varieties of wetland fauna and flora and aquatic fauna and flora in local watercourses as a result of changes in water flow rates and water quality. 			<p>Nooitgedacht mining area: Mining through pans and wetlands are authorised to be undertaken within the unnamed Tributary of the Springbokspruit.</p> <p>Wildfontein mining area: Opencast mining through a wetland is authorised to be undertaken with the unnamed Tributary of the Springbokspruit.</p>
		Store all oils/lubricants and hazardous chemicals in specified, bunded areas, specifically designed for the task.	Compliant	It was confirmed during the site visit that oil/lubricants and hazardous chemicals are stored in designated and bunded areas, which are designed for the containment of such waste.
		All vehicle and machinery maintenance will take place at designated maintenance areas. Drip trays will be placed under vehicles that have broken down in the field;	Compliant	<p>Nooitgedacht mining area: Machinery and vehicles are serviced at the Pit Engineering workshop area. No servicing of machinery and vehicles outside of the designated area was noted during the site visit. Drip trays are available for use in case of a vehicle break down in the field.</p> <p>Wildfontein mining area: All vehicle and machinery maintenance are undertaken at Hlagisa Mining workshop area. No servicing of machinery and vehicles outside of the designated area was noted during the site visit. Drip trays are available for use in case of a vehicle break down in the field.</p>
		Back-filled areas will be re-vegetated as soon as possible to minimise erosion by runoff.	Compliant	<p>Nooitgedacht mining area: Only backfilling with carbonaceous material has been undertaken. No topsoil placement and final profiling has commenced as yet. Therefore, no revegetation is required as yet.</p> <p>Wildfontein mining area: It was confirmed during the site visit that the disturbed mined out areas are being revegetated as mining progresses. No disturbed areas, apart from the approved, were noted. Rehabilitation plan indicating the seeded areas was provided.</p>
		All contaminated water (including ground and surface water from mine operational areas) will be treated to an approved standard before being released into the environment;	Compliant	<p>Nooitgedacht mining area: Mafube Colliery operates a water treatment plant for the treatment of mine water, which is released into the Springbokspruit. According to the water quality results, all the variables are within the water quality limits as prescribed in the water use licence.</p> <p>Wildfontein mining area: No treatment of contaminated water is undertaken.</p>
		An exotic species eradication and control programme will be maintained throughout the operational phase of the project.	Compliant	Mafube Colliery developed and is implementing an Alien Invasive Control Programme for the removal of alien plant species. EKOInfo CC Environmental & Wildlife Management Consultancy is responsible for the removal of alien plant species. Species were identified during the audit period and removal was undertaken. Proof of removal was provided. Mafube Colliery environmental team conduct weekly inspections to identify any emergence of exotic species and EKOInfo CC Environmental & Wildlife Management Consultancy therefore undertake the removal of the species, if identified.
			Compliant	<p>Wildfontein mining area: According to the Alien Vegetation Management Plan (dated June 2020), monitoring must be undertaken to identify any colonisation of alien and invasive species and eradication therefore. According to the weekly ECO report provided for review (dated 30 November – 04 December 2020), it was confirmed that numerous quantities of alien species were observed on rehabilitated surfaces and on safety berms and such species were eradicated.</p>
		Conduct daily inspections of process water pipelines to prevent contaminated water from entering wetlands and pans due to spillage.	Compliant	<p>Nooitgedacht mining area: Mafube Colliery Dewatering team conducts daily inspections of the process water pipelines. Reports were provided. Furthermore, Mafube Colliery Environmental Team conducts weekly inspections for the entire mining right area including the process water pipeline.</p> <p>The incident below, that occurred during the audit period must however be noted: On the 07th of April 2021 during the weekly inspection, a pipeline running from the ROM trench to Transfer Dam was found separated, and as a result water was coming out of the pipe. During the on-site investigation, it was found that the pipe reducer that was supposed to be joining the pipe was broken. At the time of the incident the diesel pump was not running, thus,</p>


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				the water was continuously coming out of the pipe due to suctioning. The water flowed into the wetland. The following corrective and preventative actions were proposed and implemented: <ul style="list-style-type: none"> Obtain and fit a new reducer in order to contain the water in the pipe-Completed Continuation of routine pipeline inspections-Ongoing Follow the lock-out procedures when pipeline maintenance is in progress-Ongoing From the site visit conducted, no spillage from the process water pipeline was noted.
			Compliant	Process water pipelines are inspected on weekly basis by Innovative Footprint (Pty) Ltd. Monthly inspections are also undertaken by Hlagisa Mining. Inspection reports were provided for review during the audit period.
		Revegetate all areas that have been disturbed by mining activities as soon as possible;	Compliant	Nooitgedacht mining area: Only backfilling with carbonaceous material has been undertaken on the mined out areas and no topsoil placement and final profiling has commenced as yet. Therefore, no revegetation is required as yet. Furthermore, no disturbed areas apart from the approved were noted. All infrastructural activities are still in use and no rehabilitation and revegetation thereof is required as yet. Wildfontein mining area: It was confirmed during the site visit that the disturbed mined out areas are being revegetated as mining progresses. No disturbed areas apart from the approved were noted. Rehabilitation plan indicating the seeded areas was provided.
		Wetland buffering and management of agricultural lands; <ul style="list-style-type: none"> A buffer of 100 metres must be incorporated around the wetlands, and cultivation be withdrawn from the buffer area to allow natural vegetation to become reinstated. 	Compliant	According to the Wetland Baseline Study and Impact Assessment (dated May 2012) compiled by Golder Associates (Pty) Ltd, a 100 m wetland buffer zone is indicated in a wetland figure. Furthermore, the Wetland Rehabilitation and Management Strategy compiled for Nooitgedacht & Wildfontein Opencast Coal Mining operations (dated June 2015) indicate the 100-metre buffer restriction within the mine footprint.
		Burning and grazing management; <ul style="list-style-type: none"> In areas where erosion is severe or proposed structures such as gabions are installed, the wetland and its buffer should be fenced off to control access by cattle. 	Compliant	Nooitgedacht mining area: No severe erosion was noted and reported during the audit period. Wildfontein mining area: No severe erosion was noted during the site visit and reported during the audit period. It must be noted that no gabions are installed within the Wildfontein mining area, therefore no need for fencing of wetland areas and buffers.
		And a grazing management plan must be put in place.	Not Applicable	No grazing activities are authorised and undertaken by Mafube Colliery within the Nooitgedacht and Wildfontein mining areas, hence no grazing management plan is required and therefore this EMPr commitment is not applicable.
		Ideally Wetlands should only be grazed in autumn, although some parts of each system should be left un-grazed to provide refugia for wetland fauna.	Not Applicable	No grazing activities are authorised and undertaken by Mafube Colliery within the Nooitgedacht and Wildfontein mining areas, hence no grazing management plan is required and therefore this EMPr commitment is not applicable.
		Water points may be established at certain points in the wetland systems that are specifically modified to be able to withstand the disturbance from cattle.	Not Applicable	No water points have been identified. Therefore, this EMPr commitment is not applicable.
		In wetlands where natural fires are controlled or prevented, the wetlands should be burned periodically (every 4 to 5 years) and such action will require the compilation and implementation of a fire management plan.	Not Applicable	No burning of wetlands is undertaken at Nooitgedacht Wildfontein mining right areas, therefore this EMPr commitment is not applicable. No natural fires were noted and reported during the audit period.
		Care should be taken to burn at times outside the nesting periods for important wetland bird species; and	Not Applicable	No burning of wetlands is undertaken at Nooitgedacht Wildfontein mining right areas, therefore this EMPr commitment is not applicable. No natural fires were noted and reported during the audit period.
		A full post-rehabilitation management plan should be established to ensure that the management of the area is compatible with achieving the restoration objectives of the project.	Compliant	A report titled: Closure Input to Inform Mafube Coal Mine's Proposed Nooitgedacht and Wildfontein Expansion (dated July 2012) was compiled to ensure that the management of the mining area are rehabilitated to progressively re-instate an area that is environmentally safe, stable and non-polluting, to be integrated into the current agricultural initiatives of the Steve Tshwete Local Municipality area.



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		Management of alien vegetation; Stands of alien vegetation, which comprise of species fitting Category 1 and Category 2, must be removed (GNR 280). Stands of species fitting Category 3, if within 30 metres of a 1:50 year flood line of river, stream etc. must also be removed (GNR 280). Other, noncategorized species should ideally be removed.	Compliant	According to the Alien and Invasive Plant Management Plan (dated 2016), species fitting into Category 1, Category 2 and Category 3 were identified and removal of such species was required as indicated in the plan. Hydro-Mulch was appointed for the removal of the identified species.
		Alien vegetation removal should begin in the upper ends of the catchments to ensure that reseedling of cleared areas does not take place from the upstream seed bank; - Cleared areas may need to be re-vegetated to stabilise the soil if natural revegetation with indigenous species does not take place.	Compliant	According to the Alien and Invasive Plant Management Plans, it is indicated that in the case of alien invasive which are within the next mining window, the alien invasive should be dozed into the pit bottom, along with the seed bank. Furthermore, cleared areas are re-vegetated to stabilise the soil in case natural revegetation with indigenous species does not take place. The report indicated that alien vegetation removal begins in the upper ends of the catchments to ensure that reseedling of cleared areas does not take place from the upstream seed bank.
		An alien vegetation management plan will be required to guide the removal of alien species in terms of the objectives and methodology followed. At present, alien species management and eradication forms part of the existing Mafube Biodiversity Action Plan in which the objective is to maintain the Mafube Mining Rights Area free of alien species. Broad guidelines are set out in this document with regard to alien species removal and the monitoring schedule to be applied.	Compliant	Alien and invasive management plans are developed for the control and removal of alien species that may be identified during the operation of the mines. Mafube Biodiversity Action Plan (dated July 2012) outlines the eradication and control of alien invasive species within Mafube Colliery. Furthermore, the Biodiversity Action Plan provide guidelines on alien species removal.
		Management and monitoring of important Biota: No threatened flora should be collected or harvested.	Compliant	Nooitgedacht mining area: According to the Terrestrial Ecology Study (dated July 2012), numerous flora species were identified within the Nooitgedacht mining area. No collection and harvesting of flora species was observed during the site visit. Monthly environmental topics and toolbox talks are communicated to employees on the importance of flora species and prohibition of collection and harvesting of the species. Proof of monthly environmental topics and toolbox talks were provided for review during the audit period. Wildfontein mining area: According to the Terrestrial Ecology Study (dated July 2012), numerous flora species were identified within the Nooitgedacht mining area. No collection and harvesting of flora species was observed during the site visit.
		No threatened fauna should be hunted.	Compliant	Nooitgedacht mining area: According to the Terrestrial Ecology Study (dated July 2012), numerous fauna species were identified within the Nooitgedacht mining area. No hunting of fauna species was observed during the site visit. Monthly environmental topics and toolbox talks are communicated to employees on the importance of flora species and prohibition of collection and hunting. Proof of monthly environmental topics and toolbox talks were provided for review during the audit period. Wildfontein mining area: According to the Terrestrial Ecology Study (dated July 2012), numerous fauna species were identified within the Nooitgedacht mining area. No hunting of fauna species was observed during the site visit.
		Where endangered animal species occur in the wetland, records should ideally be kept of sightings in order to help establish whether or not wetland management practices and rehabilitation efforts are having a positive impact on these species.	Not Applicable	According to the Terrestrial Ecology Study (dated July 2012), no endangered animal species occurring in wetland areas were identified. Furthermore, no endangered animal species were reported within the wetland areas during the audit period, therefore this EMPr commitment is not applicable.
		The local district conservation officer should be contacted to obtain further information on monitoring of important species.	Not Applicable	No endangered animal species were reported within the wetland areas during the audit period, therefore this EMPr commitment is not applicable.
Geochemistry	Opencast mining will expose carbonaceous materials to conditions that	Annual ABA testing of spoils samples to identify materials that can be placed selectively to reduce ARD risks;	Compliant	Nooitgedacht mining area: Delta H (Delta-H Water System Modelling (Pty) Ltd) conducts ABA testing of spoils samples on annual basis for Nooitgedacht and Wildfontein mining areas. Mafube Colliery's

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	can lead to acidic drainage, which will not be suitable for discharge into the environment.			Geohydrological Model Review Report (dated March 2020) was provided for review during the audit period. According to the Geohydrological Model Review Report, three spoil samples are tested to determine their leachable concentrations. Backfilling (placement of tested material) of the mined out opencast pits is informed by the results from the ABA tests. <u>Recommendation to consider when updating the Geohydrological Model Review Report:</u> Although the testing of spoil material was conducted for the year 2020, the Geohydrological Model Review Report for the year 2021 excluded the spoil testing and the commitments required below that must form part of the model update. The annual Geohydrological Model must include the testing of the spoils material, including the commitments required below that must form part of the model update to comply for the next audit period and continuously thereof and to further ensure that the concept of acid mine drainage is considered for all the aspects that are required to avoid discharge of acid mine water into the natural environment.
			Non-Compliant	<u>Wildfontein mining area:</u> From the review of the Geohydrological Model Review Report (dated March 2020), no ABA testing of the spoil material is undertaken for Wildfontein mining area. <u>Recommendation to consider when updating the Geohydrological Model Review Report:</u> It was confirmed through the review of the Geohydrological Model Review Report (dated March 2020) that the determination of the spoil material for Wildfontein Mining area was not conducted, including the commitments required below that must form part of the model update. Furthermore, the Geohydrological Model Review Report (dated June 2021) only focussed on life of mine inflows, post closure water table rebound and potential decant (acid mine drainage) for Wildfontein mining area, which excluded the testing of the spoils material including the commitments required below that must form part of the model update. The annual Geohydrological Model must include the testing of the spoils material, including the commitments required below that must form part of the model update to comply for the next audit period and continuously thereof and to further ensure that the concept of acid mine drainage is considered for all the aspects that are required to avoid discharge of acid mine water into the natural environment. It must be noted that the samples will be undertaken when the monitoring boreholes WTF1-3 are drilled, which are envisaged for 2022. Once the samples are retrieved, the geochemical test work will be conducted.
		The programme will include kinetic testing to establish likely rates of sulphide oxidation and a modelling programme to refine the first-order drainage quality predictions.	Compliant	<u>Nooitgedacht mining area:</u> Kinetic testing forms part of the geohydrological testing of the spoils for determining acid generation potential of the three spoil materials over time during the mining operation. Mafube Colliery's Geohydrological Model Review Report (dated March 2020) was provided for review during the audit period.
			Non-Compliant	<u>Wildfontein mining area:</u> From the review of the Geohydrological Model Review Report (dated March 2020), no kinetic testing of the spoils is conducted for Wildfontein mining area. Refer to the recommendation above for the inclusion of the geochemical testing of the spoils and the kinetic testing into the Geohydrological Model Review Report.
		Monitoring programme to establish spoils drainage and runoff quality during the life of mine.	Compliant	<u>Nooitgedacht mining area:</u> Geochemical testing of the spoils is undertaken to determine their leachable concentrations and runoff quality from these spoils during the life of mine. Mafube Colliery Geohydrological Model Review Report (dated March 2020), which details the above, was provided for review during the audit period.
			Non-Compliant	<u>Wildfontein mining area:</u> From the review of the Geohydrological Model Review Report (dated March 2020), no geochemical testing of the spoils is undertaken to determine their leachable concentrations and runoff quality from these spoils thereof. Refer to the recommendation above for the inclusion of the geochemical testing of the spoils into the Geohydrological Model Review Report.

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		The results will be used to validate the drainage quality modelling.	Noted	The condition is well understood by Mafube Colliery Management.
		A database of results will be established to provide a drainage quality history that can be used to assess likely post closure conditions and drainage quality;	Compliant	A database of results is established to provide a drainage quality history to assess likely post closure conditions and drainage quality. This is undertaken as part of the Geohydrological Model Review Report. According to Mafube Colliery Geohydrological Model Review Report for Nooitgedacht and Wildfontein mining areas (dated March 2020), post-closure model simulations are conducted to estimate the mine inflows and water table elevations up to 2033 to determine potential decant points.
		Field kinetic test programme including the installation of lysimeters to assess moisture content of spoil, runoff and infiltration factors, and drainage quality for inclusion in the monitoring database;	Compliant	Nooitgedacht mining area: Kinetic testing forms part of the geohydrological testing of the spoils for determining acid generation potential of the three spoil materials over time during the mining operation. Mafube Colliery's Geohydrological Model Review Report (dated March 2020) was provided for review during the audit period.
			Non-Compliant	Wildfontein mining area: From the review of the Geohydrological Model Review Report (dated March 2020), no kinetic testing of the spoils is conducted for Wildfontein mining area. Refer to the recommendation above for the inclusion of the geochemical testing of the spoils and the kinetic testing into the Geohydrological Model Review Report.
		Refine the ABA block model to include geochemical characterisation of the 4 Seam carbonaceous materials;	Compliant	Mafube Colliery Geohydrological Model Review includes geochemical characterisation of the 4 Seam carbonaceous materials.
		Use the block model to identify areas of the coal resource where high acid drainage potential material is present;	Compliant	Nooitgedacht and Wildfontein mining areas: The Geohydrological Model Review Report (dated June 2021) focussed on life of mine inflows, post closure water table rebound and potential decant (acid mine drainage) for Nooitgedacht and Wildfontein mining area. Geochemical PhreeqC model was developed as a block model to investigate the Nooitgedacht backfill pore water quality which is of high acid drainage potential material. The geochemical model considered the average mineralogical make-up of the spoils materials, rainwater infiltration as well as diffusion limited oxygen supply into the backfilled pit.
		Rehabilitated areas must be a free draining topography to minimise moisture infiltration.	Compliant	Nooitgedacht mining area: Only backfilling with carbonaceous material has been undertaken. No topsoil placement and final profiling has commenced as yet. However, Mafube Colliery will ensure that the final rehabilitation of the backfilled areas promote free draining surfaces. Wildfontein mining area: No erosion and ponding on the rehabilitated areas was noted during the site visit, therefore promoting free draining surfaces.
		Establish vegetation to act as evapotranspiration cover.	Compliant	Nooitgedacht mining area: Only backfilling with carbonaceous material has been undertaken on the mined out areas and no topsoil placement and final profiling has commenced as yet. Therefore, no vegetation is required as yet. Wildfontein mining area: It was confirmed during the site visit that the disturbed mined out areas are being vegetated as mining progresses. Rehabilitation plan indicating the seeded areas was provided. The vegetated areas therefore act as evapotranspiration cover.
Groundwater	<ul style="list-style-type: none"> Ingress of clean groundwater into mine workings; Contaminated water migrating into aquifers and daylighting into wetlands and watercourses; Contaminated water decanting 	Update the groundwater model to assess impact on the groundwater levels if the mine schedule changes;	Not Applicable	No change of the mine schedule for the current mining activities was proposed during the audit period, therefore this EMP commitment is not applicable.
		All decant positions to be provided with suitable containment facilities to allow for effective capture of water to be sent for treatment.	Not Applicable	Nooitgedacht and Wildfontein mining areas: Although decant is predicted from the Groundwater Assessment Report, no decant has occurred as yet, therefore this EMP commitment is not applicable for Nooitgedacht mining area.
		A long-term groundwater monitoring network will be established around the peripheries of the open cast pits.	Compliant	Groundwater monitoring is conducted within and around the mining areas of Wildfontein and Nooitgedacht Operations. Groundwater monitoring reports was provided for review during the audit period.
		Monitor the water quality of the boreholes, springs, eyes and fountain source zones within the project area and mitigate immediately, should any contamination occur.	Compliant	According to the Water Quality Monitoring Reports (dated December 2020 for Nooitgedacht and July 2021 for Wildfontein), groundwater water monitoring of boreholes is conducted on a quarterly basis. No contamination of the monitoring points was reported.

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	from mined areas; and <ul style="list-style-type: none"> Release of contaminated water into surface water systems, adding to the current high salt loads in the Olifants River System. 			No seepage, springs, eyes and fountain source zones occur within the mining areas, hence no monitoring of the above is undertaken.
		Sampling of seepage trenches, springs, eyes and fountain source zones and analyse for pH, EC, TSS and SO4.	Not Applicable	No seepage trenches, springs, eyes and fountain source occur within the mining areas of Nooitgedacht and Wildfontein, hence no monitoring and analysing for pH, EC, TSS and SO4 of the above is undertaken.
		Sampling of boreholes and analyse for pH, EC, TSS and SO4.	Compliant	According to the Water Quality Monitoring Reports provided for review, monitoring of boreholes and analysing of pH, EC, TSS and SO4 is undertaken.
Surface water	<ul style="list-style-type: none"> Reduction of flow in local watercourses; Reduction in pan volumes; and Pollution of surface water resources by discharge of mine water. 	Ensure that the post mining topography is free draining post mining;	Compliant	Nooitgedacht mining area: Only backfilling with carbonaceous material has been undertaken. No topsoil placement and final profiling has commenced as yet. However, Mafube Colliery will ensure that the final rehabilitation of the backfilled areas promote free draining surfaces. Wildfontein mining area: No erosion and ponding on the rehabilitated areas was noted during the site visit, therefore promoting free draining surfaces.
		Sample pans and watercourses and analyse for pH, EC, TSS SO4 and assess if further action is required.	Compliant	According to the Water Quality Monitoring Reports provided for review, pans and wetlands are sampled and pH, EC, TSS and SO4 are analysed. According to report, pH, EC, TSS and SO4 exceeded the acceptable WUL limit in all pans. No actions are required although the parameters exceeds the WUL limits. It must be noted that, the reason for the water quality exceedance in the pans is due to the changes in salt concentrations and nutrients, which impacted the quality of the waters in the pans due to seasonal changes and lithological properties.
		Inspect storm water management and pollution control systems and carry out maintenance as necessary.	Compliant	Nooitgedacht mining area: Storm water management and pollution control systems are inspected on weekly basis by Mafube Colliery Environmental Department. Inspection reports were provided for review during the audit period. Maintenance of the storm water management and pollution control systems is conducted on a weekly basis by Mafube Colliery Engineering Department. Maintenance schedules and completed maintenance reports were provided. Wildfontein mining area: Storm water management and pollution control systems are inspected on weekly basis by Innovative Footprint (Pty) Ltd. Monthly inspections are also undertaken by Hlagisa Mining. Inspection reports were provided for review during the audit period.
		Reshape and stabilise any <i>bank</i> that has been disturbed along a wetland ecosystem;	Compliant	All areas disturbed due to the alteration of seed banks are rehabilitated, reshaped and stabilised according to the approved rehabilitation plan. It was confirmed during the site visit that the disturbed wetland areas are reshaped, stabilised, and further blend in with the surrounding environment.
		Monitor water quality and metals concentrations in the adjacent and downstream aquatic ecosystems.	Compliant	Mpumamanzi Group CC conducts surface water monitoring on monthly basis in the adjacent and downstream of the aquatic ecosystems. These monitoring points are tested for metal concentrations. Surface water monitoring report was provided for review during the audit period.
		All top-soils, sub-soils, overburden and coal stockpiles will be sited away from wetlands and pans, and stored so as to prevent erosion, runoff and seepage into these systems, unless being provided for in the IWULA;	Compliant	It was confirmed during the site visit that the topsoil, subsoil, overburden and coal material are situated within the wetland areas. However, all are authorised to be situated within the wetland areas as according to the approved layout plan and the IWULA.
		The construction of silt traps, runoff collection channels and storage dams will be undertaken in accordance with Regulation 704 and Mafube IWULA and IWWMP conditions.	Compliant	According to the Integrated Water and Waste Management Plan (IWWMP) (dated August 2020), the Nooitgedacht storm water management system has been developed in accordance with Regulation GN 704 and the IWULA. All storm water infrastructures have been designed and constructed to contain a 1: 50 year flood event. Trenches and PCS's are lined. This was confirmed during the site visit.
		The release of water (storm or treated water) must take place in a controlled manner so as to minimize incidence of erosion	Compliant	Nooitgedacht mining area: Mafube Colliery operates a water treatment plant for the treatment of mine water, which is released into the Springbokspruit. The treated water is monitored before release to ensure

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		or drastic changes to water flow patterns and volumes in line with the WULA;		that no contaminated water is released to the environment. According to the water quality results, all the variables are within the water quality limits as prescribed in the water use licence. Wildfontein mining area: No treatment of contaminated water is undertaken.
		Maintain and inspect the storm water management conduit systems and pollution control dam on regular basis to ensure compliance to the IWULA and IWWMP conditions.	Non-Compliant	<p>Nooitgedacht Mining area: Storm water management and pollution control systems are inspected on weekly basis by Mafube Colliery Environmental Department. Inspection reports were provided for review during the audit period. Gundo and Mapesh Trading and Projects cc are responsible for the removal of any silt accumulating on the trenches, silt traps and PCD's. Cleaning schedules were provided for review. Although removal of silt material is undertaken, the following issues in relation to silt accumulation and storm water management were identified:</p> <ul style="list-style-type: none"> Silt accumulation at the main PCD. It must be noted that silt removal was not undertaken during the site visit due to safety reasons encountered. Mafube Colliery will identify alternative ways of removing the silt from the PCD and associated silt traps and thus, will ensure compliance to the IWULA and IWWMP conditions. The capacity of the drying beds was seen insufficient for the containment of silt material. Mafube Colliery confirmed that the reason for the above-mentioned issue is that the construction activities of the LDV wash bay were undertaken during the site visit and the equipment's utilised from the construction are used for the removal of silt accumulation as indicated above. Change Management Plan was provided, that outlined the changes undergone for operational reasons to stop the silt removal activities. Ingress of weeds on the pollution control dam silt traps. Transfer Dam and Balancing Dam -dam levels too high. Mafube Colliery submitted an amendment application for the construction of additional dams that will cater for the containment of dirty water from the dirty water areas. The application is under decision making by the DMRE. The above-mentioned dams will be able to reduce the volumes of water disposed into the Transfer Dam and the Balancing Dam and therefore, the capacity and the dam levels will be adhered to.  <p>Silt accumulation at the main PCD</p>

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				 <p>Insufficient containment for silt material at the Drying Beds, further contaminating the environment.</p>
				 <p>Ingress of weeds on the Pollution Control Dam Silt Traps.</p>
			Compliant	<p>Wildfontein mining area: Storm water management and pollution control systems are inspected on weekly basis by Innovative Footprint (Pty) Ltd. Inspection reports were provided for review during the audit period. No issues were noted during the site visit. All storm water management structures comply with the IWUL and the IWWMP.</p>
		Regular removal of debris and silt from the conduits to ensure adequate flow and from the control dam to maintain their design storage capacity.	Non-Compliant	<p>Nooitgedacht mining area: Gundo and Mapesh Trading and Projects cc are responsible for the removal of any silt accumulating on the trenches and PCD's. Cleaning schedules were provided for review. Although removal of silt material is undertaken, the following issues in relation to silt accumulation which is evident that design storage capacities of the main PCD and drying beds is not maintained:</p> <ul style="list-style-type: none"> Silt accumulation at the main PCD. It must be noted that silt removal was not undertaken during the site visit due to safety reasons encountered. Mafube Colliery will identify alternative ways of removing the silt from the PCD and associated silt traps and thus, will ensure compliance to the IWULA and IWWMP conditions. The capacity of the drying beds was seen insufficient for the containment of silt material. The capacity of the drying beds was seen insufficient for the containment of silt material. Mafube Colliery confirmed that the reason for the above-mentioned issue is that the construction activities of the LDV wash bay were undertaken during the site visit and the equipment's utilised for the construction are used for the removal of silt accumulation as indicated above. Change Management Plan was provided,

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				that outlined the changes undergone for operational reasons to stop the silt removal activities.
			Compliant	Wildfontein mining area: No debris and siltation was noted on site. It must be noted that only opencast mining activities are authorised within the Wildfontein mining area. No infrastructures that would result in silt generation are constructed.
		Design and construct pollution control dams to comply with the IWULA and IWWMP which will ensure adequate freeboard to accommodate water volumes during the wet season	Compliant	According to the Storm Water Management Plan Infrastructure (titled: Polluted Storm Water Management Report) (dated 8 August 2016) compiled by Hatch Goba Proprietary Limited, it was indicated that the polluted storm water control system was designed to have the capacity to contain affected runoff generated during the 1:50 year storm event (in accordance with GNR 704). Pollution control dams, transfer dams and balancing dams are constructed according to the IWULA and the design plans as per the completion certificates provided for review during the audit period.
		Construct a water treatment and sewage treatment facility prior to the start of construction to prevent the release of contaminated water to the environment.	Compliant	Nooitgedacht Mining area: Water treatment and sewage treatment facilities were constructed within the Nooitgedacht mining area for treatment of sewage and contaminated water, with the treated water discharged into the Springbokspruit as per the WUL. Wildfontein mining area: No treatment of contaminated water is undertaken within Wildfontein mining area since only opencast mining activities are authorised.
		Detailed source-term characterisation study for high risk sources will be completed in accordance to Best Practice Guideline G4 - Impact Prediction (DWAF, 2008). The aim of the detailed source-term study will be to refine the seepage volumes and seepage quality estimated for the mine spoils; An understanding about attenuation and long-term behaviour of the source material will be developed.	Compliant	Mafube Colliery Geohydrological Model Review – Nooitgedacht and Wildfontein is compiled and outline the seepage volumes and seepage quality estimated for the mine spoils and it is in accordance with the Best Practice Guideline G4 - Impact Prediction (DWAF, 2008).
Noise	Noise impacts.	Equipment selection to ensure that noise level does not exceed 70dBA at the property boundaries of the mine, as specified for industrial districts in SANS 10103;	Compliant	Nooitgedacht mining area: A planning matrix developed by Mafube Colliery VOHE Department is used for ensuring that the equipment selection considers the noise level limits as prescribed in the SANS 10103. Mafube Colliery developed and is implementing a Perform Surface VOHE Inspection Procedure that describes the process to be followed when performing any VOHE related inspections. Furthermore, the matrix includes the noise monitoring or inspection of the equipment used.
			Compliant	Wildfontein mining area: According to the Compliance With Noise and Silicosis 2024 Milestones Report (dated October 2020), it was confirmed that the noise level of all equipment's utilised do not exceed 70dBA.
		Noise levels measured at 1 metre from the surface of each plant or item of equipment will not exceed 85dBA;	Compliant	Wildfontein mining area: According to the Compliance With Noise and Silicosis 2024 Milestones Report (dated October 2020), it was confirmed that the noise level of all equipment's utilised do not exceed 85dBA.
		Noise levels at external sites, especially at sensitive receptors, will be limited to the allowable levels specified in SANS 10103;	Compliant	According to the Monthly Dust Fall-out Monitoring Reports provided for review, no noise exceedance at the external sites was recorded.
		Acoustic insulation of particularly noisy equipment will be done if necessary;	Not Applicable	No insulation of noisy equipment's was required during the audit period, therefore this EMPr commitment is not applicable.
		All noise generating equipment will be kept in good repair and inspected regularly to ensure that noise suppressing equipment is fully functional;	Compliant	Nooitgedacht mining area: Mafube Colliery VOHE Department conduct the inspection for all equipment used at the mine and this is conducted in accordance with the Perform Surface VOHE Inspection Procedure developed for Mafube Colliery. Furthermore, a planning matrix is developed and implemented for monitoring of all equipment is used. No issues were reported of the equipment's used.
			Compliant	Wildfontein mining area: The Occupational Hygienist from Hlagisa Mining inspect all noise generating equipment's used for the Wildfontein mining activities to ensure proper functionality. Compliance With Noise and Silicosis 2024 Milestones Report (dated October 2020) was provided for review.

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		Complaints will be investigated without delay;	Noted	No noise complaints were received during the audit period. The condition is well understood by Mafube Colliery Management.
		Noise measurements will be taken at individual sources, the mine perimeter and sensitive off-site receptors at the commencement of mining operations;	Compliant	According to the Monthly Dust Fall-out Monitoring Reports, noise measurement are undertaken at the following sources and receptors: Sources: - Mining area - Haul roads - Stockpiles - Farms and neighbor mines Receptors - Farmers and farm dwellers - Mafube village - Water resources - Neighbor mines
		Noise measurements will be repeated at sensitive receptors in response to complaints and complaints will be provided with appropriate feedback.	Not Applicable	No noise complaints were received during the audit period, therefore this EMPr commitment is not applicable.
Heritage	<ul style="list-style-type: none"> Damage to prior unidentified heritage resources; Damage to identified demarcated heritage resources. 	<p>Applying the following chance find procedures in the event of any buried resources (e.g. human remains, artefacts, etc.) being discovered during activities:</p> <ul style="list-style-type: none"> Cease all work in the immediate vicinity of the find; Demarcate the area with barrier tape or other highly visible means; Notify the South African Heritage Resources Authority (SAHRA) immediately; Commission an archaeologist accredited with the Association for Southern African Professional Archaeologists (ASAPA) to assess the find and determine appropriate mitigation measures. These may include obtaining the necessary authorisation from SAHRA to conduct the mitigation measures; and Prevent access to the find by unqualified persons until the assessment and mitigation processes have been completed. 	Not Applicable	No human remains, artefacts were discovered during the audit period, therefore this EMPr commitment is not applicable.
Socio-economics	<ul style="list-style-type: none"> Continuation of existing employment, and limited number of new jobs will be created; and Remuneration of staff and procurement of goods and services will inject cash into local economy. 	Comprehensive engagement and consultation with all affected local residents;	Compliant	Forum meetings are undertaken on quarterly basis with the communities, which are arranged by the Community Department of Mafube Colliery. Minutes of the last meeting and the attendance register were provided for review during the audit period.
		Mafube will communicate continuation of existing employment and skills development programmes to existing employees and I&APs.	Compliant	According to the minutes provided for review, the following related to employment and skills Development were discussed: Update on skills development, update on employment opportunities, and update on employment statistics. Employment and skills development programmes are communicated to employees through induction presentation.
		Continual and clear communicating with I&APs about the fact that this project offers very limited permanent employment opportunities.	Compliant	This is discussed during the forum meetings undertaken on quarterly basis. Minutes of the last meeting were provided for review during the audit period.
		Mafube Coal will continue with its existing local economic development project.	Compliant	According to the forum meeting PowerPoint Presentation (Mafube Ward 7 & 9 meeting), the following Community Skills Development projects are outlined: Yellow Machine Training, FET Scholarship Computer skills and Computer skills. This is done in accordance with the Mafube Colliery Social and Labour Plan (dated (2019-2023)).
		Set up communication channels, responsibilities and forums between the mine and surrounding public, industries and stakeholders. Maintain a community register where I&AP's can lodge queries or complaints.	Compliant	The following communication channels and forum are used by Mafube Colliery: <ul style="list-style-type: none"> Public meetings (project specific). Farmers meetings (annual). HR Department public meetings.

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				<ul style="list-style-type: none">Community engagement forum. Minutes of the above-mentioned meetings were provided for review during the audit period.
Soils, land use and land capability	<ul style="list-style-type: none">Original land capability classified as arable, grazing and wetland will cease completely until the open pits are backfilled and rehabilitated;Degradation of topsoil quality due to mixing with subsoilSoil compaction by the weight of dumped material;Loss of topsoil due to water and wind erosion; andContamination with hydrocarbons and hydraulic fluids.	Limiting the stockpile height to 3 metres and the slope to 1 in 3. All soil stockpiles, in whatever form they may be present, will be re-vegetated as soon as practically possible;	Non-Compliant	Nooitgedacht mining area: According to the Topsoil Dump Management Plan provided for review, all four topsoil stockpiles exceed the height of 3 meters and the ratio of 1:3. The topsoil stockpiles re naturally vegetated. Mafube Colliery must ensure that the topsoil stockpiles are used for concurrent rehabilitation purposes or any other purpose to contain the height of 3 meters. Mitigation measures must be identified and implemented to maintain the slope of the stockpiles to a ratio of 1:3.
			Compliant	Wildfontein mining area: According to the photographic evidence provided for review, five topsoil stockpiles have been identified (South, North, West, East 1 and East 2) within Wildfontein mining area and only the topsoil stockpile located at the southern section of the mining area exceed the height of 3 meters. All topsoil stockpiles are within the ratio of 1:3 and naturally vegetated. Those stockpiles not vegetated are currently used for rehabilitation purposes and stockpiling is still taking place. Mafube Colliery must ensure that the topsoil stockpiles are used for concurrent rehabilitation purposes or any other purpose to contain the height of 3 meters.
		Should storage exceed 6 months stockpiles will be vegetated;	Not Applicable	No stockpiles have exceeded 6 months storage. All stockpiles are used for co-current rehabilitation and for the creation of berms as mining of the opencast pit progresses.
		Fertiliser and lime application rates will be determined by soil requirements based on soil analyses;	Compliant	Fertiliser and lime selection is based on the Vegetation Establishment and Monitoring Procedure.
		Stockpiles located near watercourses will be constructed with a maximum slope of 1:3 to prevent storm water erosion and subsequent silting of the watercourse;	Non-Compliant	Nooitgedacht mining area: The Topsoil Dump Management Plan provided for review indicated that all four topsoil stockpiles exceed the ratio of 1:3. However, no erosion was noted on the stockpiles and subsequent silting of the watercourse thereof. Mitigation measures must be identified and implemented to maintain the slope of the stockpiles to a ratio of 1:3 to prevent storm water erosion and subsequent silting of the watercourse.
			Compliant	Wildfontein mining area: All topsoil stockpiles identified (South, North, West, East 1 and East 2) within Wildfontein mining area are within the ratio of 1:3 and no erosion was noted on the stockpiles and subsequent silting of the watercourse thereof.
		Induced compaction may be reduced by limiting the access of vehicles onto rehabilitated land;	Compliant	It was confirmed during the site visit that no authorised vehicles are allowed to access the rehabilitated areas. Vehicle management plan and traffic management plan are used as a form of communication to employees and visitors on the use of designated and permitted roads. Toolbox talks are also conducted on a regular basis informing the employees and visitors of the designated and permitted roads within the mining areas.
Visual, Traffic and Terrestrial ecology	Impacts, objectives, performance criteria, and mitigation measures described in the construction phase will continue into the operational phase.			
DECOMMISSIONING AND CLOSURE PHASE				
Geochemistry	Re-charge of the pit after closure could lead to poor water quality as historical oxidation products are flushed from the backfill material.	Complete rehabilitation of spoils including the slopes of the final void.	Not Applicable	Mafube Colliery’s Nooitgedacht & Wildfontein Opencast Coal Mining operations are still under the operational phase, therefore this EMPr commitment is not applicable.
		Achieve a free draining topography of any final void.	Not Applicable	Mafube Colliery’s Nooitgedacht & Wildfontein Opencast Coal Mining operations are still under the operational phase, therefore this EMPr commitment is not applicable.
		Treatment or re-use of void water to prevent decant of poor quality water to the receiving environment.	Not Applicable	Mafube Colliery’s Nooitgedacht & Wildfontein Opencast Coal Mining operations are still under the operational phase, therefore this EMPr commitment is not applicable.
Soils, land use and land capability	Rehabilitation of remaining disturbed areas will restore vegetation and a degree of ecological function.	Infrastructure removal and rehabilitation.	Not Applicable	Mafube Colliery’s Nooitgedacht & Wildfontein Opencast Coal Mining operations are still under the operational phase, therefore this EMPr commitment is not applicable.
		All infrastructure will be removed and sold or disposed of as legally required. Contaminated soil will be removed and placed at the bottom of the final void. The soil will be replaced from the various soil stockpiles and revegetated;	Not Applicable	Mafube Colliery’s Nooitgedacht & Wildfontein Opencast Coal Mining operations are still under the operational phase, therefore this EMPr commitment is not applicable.

REF NO ASPECT (OF SERVICE OR PRODUCT)	POTENTIAL IMPACTS OBJECTIVES	MITIGATION MEASURE(S)	FINDINGS	OBSERVATIONS/AUDIT EVIDENCE
		Re-establish vegetation on bare patches.	Not Applicable	Mafube Colliery's Nooitgedacht & Wildfontein Opencast Coal Mining operations are still under the operational phase, therefore this EMPr commitment is not applicable.
Socio-economics	Loss of jobs associated with operational phase. Resumption of agricultural use of land, but probably with reduced output.	Programme of re-training during the Operational Phase, providing employees with clear, transparent information on planned activities and closure dates;	Not Applicable	Mafube Colliery's Nooitgedacht & Wildfontein Opencast Coal Mining operations are still under the operational phase, therefore this EMPr commitment is not applicable.
Surface water & Groundwater	Decant and/or daylighting of polluted mine water when the pits fill up.	A monitoring borehole will be constructed up-gradient of and within each back-filled pit at the downgradient end. The boreholes will be monitored for water level and water quality;	Not Applicable	Mafube Colliery's Nooitgedacht & Wildfontein Opencast Coal Mining operations are still under the operational phase, therefore this EMPr commitment is not applicable.
		If the water quality in the downgradient part of the pit is worse than that in the borehole up-gradient of the pit and does not meet the TWQR for release into the environment or the WUL stipulations, the water will be treated until it is fit for release;	Not Applicable	Mafube Colliery's Nooitgedacht & Wildfontein Opencast Coal Mining operations are still under the operational phase, therefore this EMPr commitment is not applicable.
		Water treatment will continue until water quality objectives or water use licence requirements can be met without treatment.	Not Applicable	Mafube Colliery's Nooitgedacht & Wildfontein Opencast Coal Mining operations are still under the operational phase, therefore this EMPr commitment is not applicable.
Heritage	Damage to prior unidentified heritage resources;	Ensure rehabilitation activities are confined to the previously disturbed areas to avoid the disturbance of any undiscovered resources.	Not Applicable	Mafube Colliery's Nooitgedacht & Wildfontein Opencast Coal Mining operations are still under the operational phase, therefore this EMPr commitment is not applicable.
	Damage to identified and demarcated heritage resources.	Maintain restriction on access to localised heritage sites.	Not Applicable	Mafube Colliery's Nooitgedacht & Wildfontein Opencast Coal Mining operations are still under the operational phase, therefore this EMPr commitment is not applicable.
Air Quality, Ecology, Noise and Visual	Impacts, objectives, performance criteria, and mitigation measures described in the construction and operational phases of the EMP will continue into the decommissioning and closure phases.		Not Applicable	Mafube Colliery's Nooitgedacht & Wildfontein Opencast Coal Mining operations are still under the operational phase, therefore this EMPr commitment is not applicable.


7.2 ENVIRONMENTAL AUTHORISATION FOR THE AMENDMENT OF THE APPROVED EMPR TO BE ALIGNED WITH THE WATER USE LICENCE, THE CONSTRUCTION OF THE APPROVED EMPR APPROVED ACCESS ROAD RUNNING PARALLEL TO THE CONVEYOR BELT AND THE USE OF SUCH ROAD FOR MINING PURPOSE ONLY AND THE AMENDMENT OF THE INFRASTRUCTURE PLAN CONTAINED IN THE APPROVED EMPR (REF: (MP) 30/5/1/2/3/2/1 (10026) EM APPROVED IN JULY 2020.

Ref. No.	CONDITION	FINDINGS	OBSERVATIONS/AUDIT EVIDENCE
8.1	STANDARD CONDITIONS		
8.1.1	The company must adhere to the amended EMPR submitted to this office on the 12 th of December 2019.	Compliant	Mafube Colliery ensures implementation/adherence of the EMPr through the following: <ul style="list-style-type: none"> Conducting internal and external environmental audits to check compliance with the commitments outlined in the EMPr. Monthly inspections to ensure that the activities are undertaken according to the EMPr. Furthermore, if non-compliances are identified from the audits and monthly inspections conducted, action plans are compiled and implemented to ensure continual compliance with such specific commitments.
8.1.2	The company must conduct an annual internal and external environmental performance audit and submit the report to this office (this should be for the whole mine).	Non-Compliant	External annual environmental audit is conducted to assess compliance with the commitment/conditions stipulated in the EMPr and the EA. Proof of submission of the external audit to the Department of Mineral Resources and Energy was provided. Mafube Colliery conduct internal environmental audits on a two (2) yearly basis as a requirement for the SLP Environmental compliance audits, hence a decision was made to conduct two (2) yearly audits for Nooitgedacht & Wildfontein Opencast Coal Mining operations. Internal audit reports and proof of submission to the DMRE were provided for review during the audit period. Therefore, no annual internal audits were undertaken. <p>Mafube Colliery must ensure that annual internal audits are conducted to determine the compliance status for Nooitgedacht & Wildfontein Opencast Coal Mining operations and to ensure compliance with this condition. It must be noted that the internal environmental audit for Nooitgedacht & Wildfontein Opencast Coal Mining operations is scheduled for the 24 to 25 November 2021.</p>

8.1.3	All the recommendations in the specialist reports must be adhered to.	Compliant	The condition is well understood by Mafube Colliery Management. All relevant recommendations conducted by the environmental specialists were included in this EMPr, which has been audited during this audit period. Mafube Colliery ensures implementation/adherence of the recommendations in the specialist reports through the following: <ul style="list-style-type: none"> Conducting internal and external environmental audits to check compliance with the commitments outlined in the EMPr (commitments relating to the recommendations outlined in the specialist reports). Monthly inspections to ensure that the activities are undertaken according to the EMPr. Furthermore, if non-compliances are identified from the audits and monthly inspections conducted, action plans are compiled and implemented to ensure continual compliance with such specific commitments.
8.1.4	All comments and recommendations from other Department must be adhered to.	Noted	No comments were received from any Department with regards to this Environmental Authorisation. The condition is well understood by Mafube Colliery Management.
8.1.5	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.	Noted	The condition is well understood by Mafube Colliery Management. The mine was assessed through this audit for compliance with all conditions in this authorization.
8.1.6	The holder of the Authorisation must ensure 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 the authorization.	Compliant	The Environmental superintendent of Mafube Colliery is appointed to ensure compliance with the conditions of the environmental authorisation. Compliance to the conditions of the environmental authorisation by the any agent, sub-contractor, employee or person rendering a service at the facility are ensured through monthly inspections, internal audits and annual external audits. Should any concerns (including non-compliance) be identified, such are recorded on the Enablon system as incidents for corrective auctioning.
8.1.7	Any changes to, or deviations from, the project description set out in this Authorisation must be approved, in writing, by the Department before such changes or 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.	Not Applicable	No changes have been made to this environmental authorisation, therefore this condition is not applicable.
8.1.8	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 the Department, within fourteen (14) days of the above specific change.	Not Applicable	No changes of the applicant's contact details, including the name of the responsible person, the physical or postal address and/or telephonic details, including the transfer of this environmental authorization have been made, therefore this condition is not applicable.
8.1.9	A copy of this authorization must be kept on site.	Compliant	The copy of this environmental authorisation is kept on site by the Environmental Department. This was confirmed during the site visit.
	The Authorisation must be produced to any Government official (s) who may requests to see it for inspection purposes and must be available to the contractors (s)/subcontractor (s) authorized to undertake work at the property.	Noted	The condition is well understood by Mafube Colliery Management.
8.1.10	This authorization does not negate the holder of the authorization, responsibility to comply with any other statutory requirements that may be applicable to the undertaking of the activity.	Noted	The condition is well understood by Mafube Colliery Management.
8.1.11	After an appeal period has expired and no good course to extent the appeal period has been submitted in accordance with chapter two of the National Appeal Regulation of 2014, a thirty day written notice must be given to the Department that the activity will commence. Commencement for the purpose of this condition includes site preparations.	Not Applicable	No appeal was lodged with regards to this environmental authorization, therefore this condition is not applicable.
8.2.	SPECIFIC CONDITIONS		
8.2.1.	COMMISSIONING OF THE ACTIVITY		
8.2.1.1.	This Authorisation is hereby solely granted for the following:		
d)	Inclusion of Wildfontein (Hlagisa) mining and water management strategy: Hlagisa Mining (Pty) Ltd has been constructed by Mafube to undertake mining activities at the Wildfontein pit (forming part of the current Authorisation) until the Wildfontein portion is ceded to them. Until such time, this EMPr needed to be aligned with the approved Wildfontein water use Licence to reflect the water management strategy at Wildfontein pit and Hlagisa operation (which is located north-east of the Wildfontein pit). The arrangement includes a pipeline from Wildfontein pit pumping water from the pit to Hlagisa pollution control dam.	Noted	The condition is well understood by Mafube Colliery Management.
e)	Private maintenance of road instead of public maintenance of road: The 2012 approved EMPR stipulated that: <ul style="list-style-type: none"> An overland conveyor to transport the run-of-mine coal from the Nooitgedacht operations to Mafube colliery 	Noted	The condition is well understood by Mafube Colliery Management.

	<ul style="list-style-type: none"> A maintenance service road which will run parallel to the overland conveyor and this will be a public road <p>The change which triggers an EMPR amendment in the above infrastructure is that in the current detailed designs of the proposed public access road running parallel to the conveyor belt, allowing access to the operational activities, will be constructed as a private gravel road (for use by Mafube only) instead of a public road.</p>		
f)	<p>Detailed infrastructure layout plans and updated impacts and associated management measures</p> <p>A number of aspects that were not clear on the legend of the infrastructure and mine layout plans, contained on the approved EMPR, needed to be updated to reflect detailed plans in the EMPR amendment, relating to the approved activities. The EMPR is also updated to reflect the latest wetland delineation (2015) and associated impacts and management measures.</p>	Noted	The condition is well understood by Mafube Colliery Management.
8.2.1.2.	The activity may not commence without the necessary permit/licence/approvals and/or service agreements, where it is relevant, from or with the relevant regulatory authorities whether national, provincial or local.	Compliant	An environmental authorisation, EMPr and Water Use Licences, which are the environmental licences/approvals required, were obtained before commencement of the activities associated with the Nooitgedacht and Wildfontein operations. This was confirmed by the documents provided to us.
8.2.1.3.	The company must apply the principle of best practicable environmental options for the technologies used/implemented during the project.	Compliant	<p>The following, amongst others, is undertaken by Mafube Colliery for applying the best practicable environmental options for the technologies used/implemented during the project:</p> <ul style="list-style-type: none"> Systems for monitoring of water, waste, dust, noise, aquatic systems and wetland areas are in place. The specific personnel responsible for the management of such technology or area undertake environmental monitoring of all equipment's, machinery, mining infrastructures/structures. A system of reporting and monitoring of non-compliances, incidents (Enablon) is implemented where corrective and preventive mitigation measures and action plans are outlined for avoiding the re-occurrence of such incidents.
8.2.1.4. Pre-construction Phase			
a)	The Environmental Control Officer (ECO) must monitor the activities and also monitor compliance with the conditions of the EA and the submitted regulation 32 report.	Not Applicable	Mafube Colliery's Nooitgedacht & Wildfontein Opencast Coal Mining operations are under the operational phase, therefore this condition is not applicable.
b)	In order to ensure safety, all employees must be given the necessary personnel protective equipment (PPE).	Not Applicable	Mafube Colliery's Nooitgedacht & Wildfontein Opencast Coal Mining operations are under the operational phase, therefore this condition is not applicable.
c)	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.	Not Applicable	Mafube Colliery's Nooitgedacht & Wildfontein Opencast Coal Mining operations are under the operational phase, therefore this condition is not applicable.
d)	If any soil contamination is noted at any phase of the proposed activity(ies), the contaminated soil must be removed to a licenced waste disposal facility and the site must be rehabilitated to the satisfaction of the Department and Department of Water and Sanitation.	Not Applicable	Mafube Colliery's Nooitgedacht & Wildfontein Opencast Coal Mining operations are under the operational phase, therefore this condition is not applicable.
	The opportunity for the onsite remediation and re-use of contaminated soil must be investigated prior to the disposed and this Department must be informed in this regard.	Not Applicable	Mafube Colliery's Nooitgedacht & Wildfontein Opencast Coal Mining operations are under the operational phase, therefore this condition is not applicable.
8.2.1.5. Access roads and traffic impacts			
a)	Necessary signage and traffic measures must be implemented for safety of other road users regarding the diversion of the main roads (if applicable).	Not Applicable	No roads diversion is proposed for the Nooitgedacht & Wildfontein Opencast Coal Mining operations, therefore this condition is not applicable.
b)	Necessary signage and traffic measures must be implemented for safe and convenient access to the site from adjacent roads.	Compliant	Signages are erected at the entrance of the Nooitgedacht and Wildfontein Mining operations. This was confirmed during the site visit.
c)	Access roads must be well maintained throughout the mining operation.	Compliant	It was confirmed during the site visit that the access roads of the Nooitgedacht and Wildfontein Mining operations are well maintained. No concerns were noted during the site visit.
8.2.1.6. Air quality management			
a)	Proper measures must be put in place to suppress dust in order to minimize nuisance conditions.	Compliant	Water bowsers are used to dust suppress the haul and dirty roads.
b)	A speed restriction of 40km/h must be enforced and monitored on site for all mine vehicles.	Compliant	<p>Nooitgedacht and Wildfontein mining areas:</p> <p>Speed limit of 20 km/h is enforced within the opencast mining areas and 40 km/h within the infrastructural areas. This was confirmed during the site visit. Speed investigation at Mafube Colliery is conducted using the Nicholas Auto Enterprise (NAE) System on site. It functions as a speed control register where every driver of an LDV is tagged on daily bases and reported to the operation's Safety department. Latest summary report was provided during the audit. Written warnings are issued for over speeding valid for a period of one year.</p>
8.2.1.7. Noise			

a)	Activities must be limited to normal hours.	Compliant	Mining activities are undertaken between the hours of 6 am to 3 pm following another shift from 3 pm to 6 am. These are considered as normal working hours and has been agreed to with the responsible state organ.
b)	Mine vehicles must be fitted with standard silencers prior to beginning of construction.	Compliant	All machinery and vehicles employed are fitted with exhaust systems and are maintained in a good state of repair. No concerns in this regard were evident.
8.2.1.8. Erosion control measures			
a)	All soil surfaces compacted as a result of the navigation life extension project activities must be ripped, and imported materials must be removed.	Compliant	According to the Rehabilitation Strategy and Implementation Plan for Mafube Colliery Nooitgedacht and Wildfontein Operation (dated January 2020), the Nooitgedacht & Wildfontein Opencast Coal Mining operations are under operational phase and concurrent rehabilitation is undertaken as the mine progresses. No activities relating to the commissioning of the mine is currently undertaken. All areas used for the construction phase activities that were no longer required were rehabilitated which included ripping of any compacted areas. In view of the fact that the mine is in its operational phase where concurrent rehabilitation is conducted, compaction and ripping of the soil surfaces is conducted only where and when necessary. Should ripping of compacted be required, such is conducted in accordance with the Vegetation Establishment and Monitoring Procedure (dated February 2016). The name of the project "Navigation Life Extension Project" presented in the condition is incorrect. Mafube must request that the name of the project be changed to "Mafube Life Extension Project".
b)	Any erosion channel developed must be restored to a proper condition.	Not Applicable	No erosion was observed during the site visit, therefore this condition is not applicable.
8.2.1.9. Excavation activities			
a)	Topsoil must be stripped and stockpiled adjacent to the gravel roads prior the establishment of the road.	Not Applicable	The construction of the access road is completed and is under operational phase, therefore this Environmental Authorisation condition is not applicable.
b)	Topsoil must be protected and used as part of rehabilitation.	Not Applicable	The construction of the access road is completed and is under operational phase, therefore this Environmental Authorisation condition is not applicable.
8.2.1.10. Waste management			
a)	General waste must be kept in containers which are wind and scavenger proof, and disposed of at a permitted landfill site.	Compliant	Nooitgedacht mining area: General waste is kept in closed containers and the waste is disposed off by TL Ideas to a licensed landfill site. Disposal certificates were provided for review during the audit period. Wildfontein mining area: General waste is kept in closed containers and EnviroServe disposes off the waste to a licensed landfill site. Disposal certificates were provided for review during the audit period.
b)	No waste must be disposed of through burying and burning.	Compliant	Waste Management Procedures provided for review outlines ways of separating, storing and disposing waste. By undertaking doing so, littering and burning of waste should be easily avoided. Environmental awareness and induction is also conducted for every employee, contractor and visitors, which include waste management practice. Furthermore, no burying and burning of waste was noted during the site visit.
c)	All hazardous waste must be disposed of at an official registered site, or be removed by registered hazardous waste contractors.	Compliant	Nooitgedacht mining area: Hazardous waste is collected by TL Ideas and disposed of to a registered landfill site (Holfontein landfill site). Safe disposal certificates were provided for review during the audit period. Wildfontein mining area: Hazardous waste is collected by EnviroServe and disposed of to a registered landfill site (Holfontein landfill site). Safe disposal certificates were provided for review during the audit period.
d)	An emergency preparedness plan to address any pollution incidents (i.e., such as oil spillage etc.) that occur on site must be developed.	Compliant	Emergency preparedness plans that include the management of spillages are developed and implemented. Plans were provided for review during the audit period.
8.2.1.12. Surface and groundwater contamination must be prevented and/or mitigated by implementation of the following conditions			
a)	Irrespective of the nature of a spillage (whether major or minor), all spillages must be cleaned up as soon as they occur.	Compliant	Soils that are contaminated during the operation are removed and the area contaminated is cleaned up in accordance with the Chemical Spillage and Clean up Procedure and the Waste Management Procedures developed. The contaminated soils are regarded as hazardous waste and are removed on site by TL Ideas and EnviroServe to the licenced landfill sites.
b)	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.	Compliant	Storage areas of the chemical products (including petrochemical products) are bunded and concreted to avoid contamination of the surrounding environment. Any spillages of petrochemical products are cleaned up in accordance with the Chemical Spillage and Clean up Procedure and the Waste Management Procedures. The contaminated soils are regarded as hazardous waste and are removed on site by TL Ideas and EnviroServe to the licenced landfill sites. No petrochemical spillages were noted during the site visit.
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.	Compliant	Fire extinguishers are available at different areas within the mining area. This was confirmed during the site visit.

b)	Workers must be adequately trained in the handling of firefighting equipment.	Compliant	Training certificates of the fire fighting team appointed for the handling of firefighting equipment's were provided for review during the audit period.
c)	Open fires must strictly be prohibited.	Compliant	No open fires were noted during the site visit.
d)	Smoking must be prohibited in the vicinity of flammable substances.	Compliant	Smoking signages are provided on the diesel and waste oil tanks. No person was seen smoking in the vicinity of the diesel and waste oil tanks.
			
			Figure 5: No Smoking Signage erected at the diesel and waste oil tanks
e)	Cooking and heating fires must be permitted only in designated areas with appropriate safety measures.	Compliant	Cooking is done only at the kitchen areas and all safety measures are implemented when cooking. No use of heating fires is undertaken at Mafube Colliery.
8.2.1.15. Safety			
a)	An Emergency Response Plan should be available for accidental spills and firefighting during both construction and operation of the project.	Compliant	Emergency preparedness plans that include the management of accidental spillages and fires are developed and implemented. Plans were provided for review during the audit period.
b)	In the event of emergency, the holder must notify the department within 24hrs, and contact relevant emergency services in the area.	Compliant	Nooitgedacht mining area: On the 07 of April 2021 during the weekly inspection, a pipeline running from the ROM trench to Transfer Dam was found separated, and as a result water was coming out of the pipe and resulting in contamination to the environment. The Department of Water and Sanitation was notified on the 08 April 2021. According to the above timeframes and although mitigation measures and actions were developed and implemented to manage the incident, the reporting period was within 24 hours as required.
		Noted	Wildfontein mining rea: No emergencies requiring reporting spillages and fire situations that are reportable to the Department of Mineral Resources and Energy occurred during the audit period. Mafube Colliery will ensure that the relevant Department is notified within 24 hours of any occurrence of emergency requiring reporting.
c)	All significant pollution incidents must be reported to the Department within forty-eight (48) hours of occurrences.	Compliant	Nooitgedacht mining area: On the 07 of April 2021 during the weekly inspection, a pipeline running from the ROM trench to Transfer Dam was found separated, and as a result water was coming out of the pipe and resulting in contamination to the environment. The Department of Water and Sanitation was notified on the 08 April 2021. According to the above timeframes and although mitigation measures and actions were developed and implemented to manage the incident, the reporting period was within 48 hours.
		Noted	Wildfontein mining area:

			No significant pollution incidents occurred during the audit period. Mafube Colliery will ensure that the relevant Department is notified within 48 hours of any occurrence of any significant pollution incident.
8.2.1.18. Compliance with other legislation			
a)	The National Environment Management Act, 1998 (Act 107 of 1998), with particular reference to the principle in chapter 2 of the said Act.	Compliant	An Environmental Authorisation was granted for the development and the operation of the mining activities associated with the Nooitgedacht and Wildfontein Mining operations.
b)	The National Water Act, 1998 (Act 36 of 1998), with particular reference to the sections pertaining to any activity in the proximity of dams and catchments areas, rivers, marshes, streams, pans and other water courses.	Compliant	Integrated water use licences are obtained for the activities occurring in close proximity and within the streams/wetland areas/pans. This was confirmed through the assessment of the water use licences and the Google Earth imagery.
c)	The assurance of this authorization does not exempt the licence holder from compliance with any other legislation including Section 40 of the National Water Act, 1998 (Act 36 of 1998)	Noted	The condition is well understood by Mafube Colliery Management.
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.	Compliant	Mafube Colliery developed and is implementing a procedure titled: Monitoring, Audits and Review Procedure (dated March 2017). Mafube Colliery conducts monitoring for dust fall-out, particulate matter, noise and vibration on site and at the identified receptors. According to the dust monitoring reports, no exceedances of dust-fall out and PM10/2.5 for the reported period. Furthermore, according to the Blasting Reports, ground vibration and air blast levels at the selected stations were within the required limits.
e)	The Conservation of Agriculture Resources Act, 1983 (Act 43 of 1983), with particular references to the sections pertaining to soil conservation.	Compliant	Erosion control measures (such as culverts and earth berms) are in place at the crossings to limit the erosion impacts of the crossing. Water management structures such as transfer dams, balancing dams, pollution control dams and a water treatment plant are constructed for the containment of dirty water generated from the dirty areas to avoid contamination.
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.	Compliant	According to the Heritage Impact Assessment Study (dated May 2012) complied for Nooitgedacht and Wildfontein Reserves, a number of formal and informal graveyards were identified. However, it was indicated by Mafube Colliery that no grave relocation was undertaken and currently the graves are fenced off, with safe and controlled access for any relatives or friends who wish to visit the deceased.
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 100m from structures (silos), that must be protected; as well as those sections pertaining to rehabilitation of the surface.	Compliant	Concurrent rehabilitation is undertaken at both Nooitgedacht and Wildfontein mining operations. No mining is undertaken within 100m from structures (silos). Health and Safety signage's, posters and inductions are used at the mine for informing employees, visitors and contractors of the health and safety measures pertaining operation Nooitgedacht and Wildfontein sections. Induction presentations are communicated to employees, contractors, and visitors to avoid any unsafe environment.
i)	The National Environmental Management: Waste Act (Act No. 59 of 2008).	Compliant	Storage areas of the chemical products and hazardous waste are bunded and concreted to avoid spillages. General waste is stored in waste bins. All waste generated are collected by the responsible waste collectors and disposed off at licenced landfill sites. Any spillages are cleaned up in accordance with the Chemical Spillage and Clean up Procedure and the Waste Management Procedures developed.
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 the operation being 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 emanating from this Authorisation. The holder shall be responsible from all the costs necessary to comply with the above condition unless otherwise specified.	Noted	The condition is well understood by Mafube Colliery Management.
b)	The holder and the contractor must ensure that serviceable ablution facilities are available for employees.	Compliant	Ablution facilities are available on site and are served if required.
8.2.2. MANAGEMENT OF THE ACTIVITY			
a)	A copy of an EA, Regulation 32 report and all other reports associated with this application must always be available on site so as to monitor compliance with conditions outlined in both the documents. Both documents must be used as on-site reference documents during the life of the mine.	Compliant	A copy of the Environmental Authorisation (EA), Regulation 32 report (EMPR and EA amendment report) and Water Use License for the authorized activities are available on site by the Environmental Department.
b)	All duties and responsibilities as outlined in the EA are binding throughout the life of the mine.	Noted	The condition is well understood by Mafube Colliery Management.
c)	Any proposed amendments to the regulation 32 report (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 and adhered to.	Not Applicable	No amendments of the EMP were proposed and undertaken during the audit period, therefore this condition is applicable.
8.2.3. Environmental Control Officer			
a)	An Environmental Control Officer must monitor and ensure compliance and correct implementation of all mitigation measures and provisions as stipulated in the regulation 32 report and this EA.	Compliant	Ingrid Sithole from Mafube Colliery monitor compliance and correct implementation of the EMP through the following:

			<ul style="list-style-type: none"> Ensuring that internal and external environmental audits are conducted to check compliance with the commitments outlined in the EMPr. Monthly inspections are conducted to ensure that the activities are undertaken according to the EMPr. <p>Furthermore, if non-compliances are identified from the audits and monthly inspections conducted, action plans are compiled and implemented to ensure continual compliance with such specific commitments.</p>
b)	The Environmental Control Officer must also monitor the implementation of specific elements of the regulation 32 report and this EA.	Compliant	<p>Ingrid Sithole from Mafube Colliery monitor implementation of all environmental elements included in the EMPr and EA through the following:</p> <ul style="list-style-type: none"> Ensuring that internal and external environmental audits are conducted to check compliance with the commitments outlined in the EMPr. Monthly inspections are conducted to ensure that the activities are undertaken according to the EMPr. <p>Furthermore, if non-compliances are identified from the audits and monthly inspections conducted, action plans are compiled and implemented to ensure continual compliance with such specific commitments.</p>
c)	All duties and responsibilities as outlined in the regulation 32 report and this EA are biding throughout the life of project/mine.	Noted	The condition is well understood by Mafube Colliery Management.
8.2.4. Site Closure and Decommissioning.			
a)	Invasive species must be eradicated and the area must be monitored for a period of 1 year after the completion of the walk.	Not Applicable	No dragline is proposed for Nooitgedacht and Wildfontein Mining operations, therefore this condition is applicable.
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 the Authorisation.	Noted	The condition is well understood by Mafube Colliery Management.
b)	It is the holder of this Authorization's responsibility to ensure that an ongoing management and monitoring of the impacts of the activity on environment throughout the life of the mine is put into practice.	Noted	The condition is well understood by Mafube Colliery Management.
c)	Water monitoring Water related impacts and management measures must be implemented as per the initial granted EA.	Noted	The condition is well understood by Mafube Colliery Management.
8.4. RECORDING AND REPORTING TO THE DEPARTMENT			
AUDITING			
Audit 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.	Noted	The condition is well understood by Mafube Colliery Management.
	The License Holder must take any records or documentation available to the responsible authority upon request, as well as any other information the responsible authority may require.	Noted	No records or documentation related to this authorization was requested from the Department of Mineral Recourses during the audit period. The condition is well understood by Mafube Colliery Management.
REPORTING			
Reporting of incidents			
-	The Licence Holder must, within 24 hours, notify the responsible authority of the occurrence or detection of any incident of any incident on the site which has the potential to cause or has caused pollution.	Compliant	Nooitgedacht mining area: On the 07 of April 2021 during the weekly inspection, a pipeline running from the ROM trench to Transfer Dam was found separated, and as a result water was coming out of the pipe and resulting in contamination to the environment. The Department of Water and Sanitation was notified on the 08 April 2021. According to the above timeframes and although mitigation measures and actions were developed and implemented to manage the incident, the reporting period was within 24 hours.
		Noted	Wildfontein mining area: No incidents on the site which have the potential to cause or has caused pollution occurred during the audit period. Mafube Colliery will ensure that the relevant Department is notified within 24 hours of any incident on the site which has the potential to cause or has caused pollution.
-	The licence holder must, within 14 days, or a shorter period of time, if specified by the responsible authority, from the occurrence or detection of any incident to the responsible authority of measures taken to-	Compliant	Mitigations, preventive actions and investigations were identified and implemented to prevent recurrence of a similar incident and for causing any further impacts.
	<ul style="list-style-type: none"> Correct the impact resulting from the incident 		

	<ul style="list-style-type: none"> Prevent the incident from causing any further impacts; and Prevent a recurrence of a similar incident 		
-	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.	Not Applicable	<p>Nootgedacht mining area: Measures to address the incident were identified and implemented within 21 days from the date of occurrence, therefore this condition is not applicable.</p> <p>Wildfontein mining area: No spillages and fire situations that are reportable to the Departments occurred during the audit period.</p>
Other reports			
-	The licence holder must submit a written report to the responsible authority regarding any deviations from plans described in this authorization and must obtain written permission from the responsible authority before such deviations may be implemented.	Not Applicable	No deviations from plans described in this authorization have been proposed during the audit period, therefore this condition is applicable.
-	<p>The authorization holder must submit monthly reports. The audit report must convey the following:</p> <p>The date in which the audit was carried out,</p> <p>The outcome of the audit, in relation to the conditions stipulated in the regulation 32 report and the actions taken to mitigate environmental impacts on site.</p> <p>Records of monitoring and/or auditing must be made available for inspection to this Department and any other relevant authority inspecting the development activities.</p> <p>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 complaints received from the public.</p> <p>All records relating to the implementation of the regulation 32 report must be kept in the office where it is safe and can be retrievable.</p>	Compliant	<ul style="list-style-type: none"> Monthly environmental inspections are undertaken by the Environmental Department. Annual external environmental audits are conducted and submitted to the DMRE. The environmental audit report includes the date in which the audit was carried out. The outcome of the above-mentioned audit, in relation to the conditions stipulated in the regulation 32 report and the actions taken to mitigate environmental impacts on site are included in the audit report. Records of monitoring and/or auditing are made available for inspection to the DMRE and any other relevant authority inspecting the development activities. Records relating to compliance and non-compliance with the conditions of this Authorisation are kept electronically by the Environmental Department. Such records are made available to this Department within seven (7) days of receipt of a written request by the Department. All records relating to the implementation of the regulation 32 report must be kept electronically by the Environmental Department.
8.5. NON-COMPLIANCE			
a)	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.	Noted	The condition is well understood by Mafube Colliery Management.
b)	The holder shall be responsible for all costs necessary to comply with the above conditions unless otherwise specified.	Noted	The condition is well understood by Mafube Colliery Management.
c)	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 .	Noted	No non-compliance of any condition of this authorization was reported during the audit period. Mafube Colliery must ensure that the Department of Mineral Resources and Energy is notified of any non-compliances identified.
d)	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 such offence may result in section 49(a) being enforced.	Noted	The condition is well understood by Mafube Colliery Management.
9.APPEAL OF AUTHORISATION			
--	The holder of the Authorisation must notify registered interested and affected party, in writing and within fourteen (14) days, of receiving the Department's decision. The notification must-	Compliant	<p>Notification to the registered interested and affected parties of receiving the Department of Mineral Resources and Energy's decision of this Environmental Authorization was submitted on the 16th July 2020 and the Environmental Authorization was received from the Department of Mineral Resources and Energy on the 03rd July 2020 of which the registered interested and affected parties were notified within 14 days. The notice include the following:</p> <ul style="list-style-type: none"> 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 Regulations of 2014. Advice the interested and affected parties that a copy of the Authorisation and reasons for the decision will be furnished on request. Details of an appeal against the decision must lodged in terms of Chapter 2 of the National Appeal Regulations of 2014.
a)	Specify the date on which the Authorisation was issued.		
b)	Inform the registered interested and affected parties of the appeal procedure provided for in chapter 2 of the National Appeal Regulations of 2014.		
c)	Advice the interested and affected parties that a copy of the Authorisation and reasons for the decision will be furnished on request.		
d)	An appeal against the decision must lodged in terms of Chapter 2 of the National Appeal Regulations of 2014.		

8 DELIBERATIONS

8.1 ADEQUACY AND COMPLIANCE WITH THE MAFUBE COLLIERY NOOITGEDACHT AND WILDFONTEIN COAL RESERVE'S EMPR

8.1.1 ADEQUACY OF THE EMPR

An assessment was conducted for the determination of the ability of the approved EA and EMPr to adequately address the impacts that are arising from the Mafube Colliery Nooitgedacht and Wildfontein coal reserves. Assessment of the approved EA and EMPr indicated that the approved EA and EMPr are adequate for the management of environmental impacts from the Mafube Colliery Nooitgedacht and Wildfontein coal reserve.

8.1.2 COMPLIANCE WITH THE EMPR

The following non-compliances were identified during the audit period:

- **Nooitgedacht Mining area:**
Storm water management and pollution control systems are inspected on weekly basis by Mafube Colliery Environmental Department. Inspection reports were provided for review during the audit period. According to the inspection report and the site visit conducted, the following issues were noted:
 - Silt accumulation at the main PCD.
 - The capacity of the drying beds was seen insufficient for the containment of silt material.
 - Ingress of weeds on the pollution control dam silt traps.
 - Transfer Dam-dam level too high.
 - Balancing Dam-dam level too high.
- **Nooitgedacht Mining area:**
Gundo and Mapesh Trading and Projects cc are responsible for the removal of silt accumulating on the trenches and PCD's. Cleaning schedule were provided for review during the audit period. Although removal of silt material is undertaken, the following issues in relation to silt accumulation, which is evident that design storage capacities of the main PCD and drying beds are not maintained:
 - Silt accumulation at the main PCD.
 - The capacity of the drying beds was seen insufficient for the containment of silt material and contamination to the environment was observed.
- **Wildfontein mining area:**
From the review of the Geohydrological Model Review Report (dated March 2020), no ABA testing of the spoil material is undertaken for Wildfontein mining area.
Recommendation to consider when updating the Geohydrological Model Review Report:
It was confirmed through the review of the Geohydrological Model Review Report (dated March 2020) that the determination of the spoil material for Wildfontein Mining areas was not conducted, including the commitments required below that must form part of the model update. Furthermore, the Geohydrological Model Review Report (dated June 2021) only focussed on life of mine inflows, post closure water table rebound and potential decant (acid mine drainage) for Wildfontein mining area, which excluded the testing of the spoils material including the commitments required below that must form part of the model update.
The annual Geohydrological Model must include the testing of the spoils material, including the commitments required below that must form part of the model update to comply for the next audit period and continuously thereof and to further ensure that the concept of acid mine drainage is considered for all the aspects that are required to avoid discharge of acid mine water into the natural environment.
- **Wildfontein mining area:**

From the review of the Geohydrological Model Review Report (dated March 2020), no geochemical testing of the spoils is undertaken to determine their leachable concentrations and runoff quality from these spoils thereof.

- **Wildfontein mining area:**

From the review of the Geohydrological Model Review Report (dated March 2020), no kinetic testing of the spoils is conducted for Wildfontein mining area.

- **Nooitgedacht mining area:**

According to the Topsoil Dump Management Plan provided for review, all four topsoil dumps exceed the height of 3 meters and the ratio of 1:3.

8.2 COMPLIANCE WITH THE ENVIRONMENTAL AUTHORIZATION

8.2.1 MAFUBE COLLIERY NOOITGEDACHT AND WILDFONTEIN COAL RESERVE'S ENVIRONMENTAL AUTHORISATION

The name of the project "Navigation Life Extension Project" presented in the condition is incorrect. Mafube must request that the name of the project be changed to "Mafube Life Extension Project".

The following non-compliant finding was reported during the audit period:

- External annual environmental audit is conducted to assess compliance with the commitment/conditions stipulated in the EMPr and the EA. Proof of submission of the external audit to the Department of Mineral Resources and Energy was provided. Mafube Colliery conduct internal environmental audits on a two (2) yearly basis as a requirement for the SLP Environmental compliance audits, hence a decision was made to conduct two (2) yearly audits for Nooitgedacht & Wildfontein Opencast Coal Mining operations. Internal audit reports and proof of submission to the DMRE were provided for review during the audit period.

9 CONCLUSION

This environmental audit report was compiled to comply with the relevant legislative requirements specifically 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 approved EA and EMPr. This audit report will be submitted to the competent authority. Within 7 days of submission of this Audit Report to the competent authority, the Mafube Colliery must notify all potential and registered I&APs of the submission, and make this report immediately available to anyone on request and on a publicly accessible website.

10 DISCLAIMER

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

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

It is recommended that Greenside Colliery develop action plans to address non-compliances to the EMPr commitments, reported in this audit report and the actions be implemented to ensure compliance.



Signed:

Date: 01 December 2021

O.T. Shikwane

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