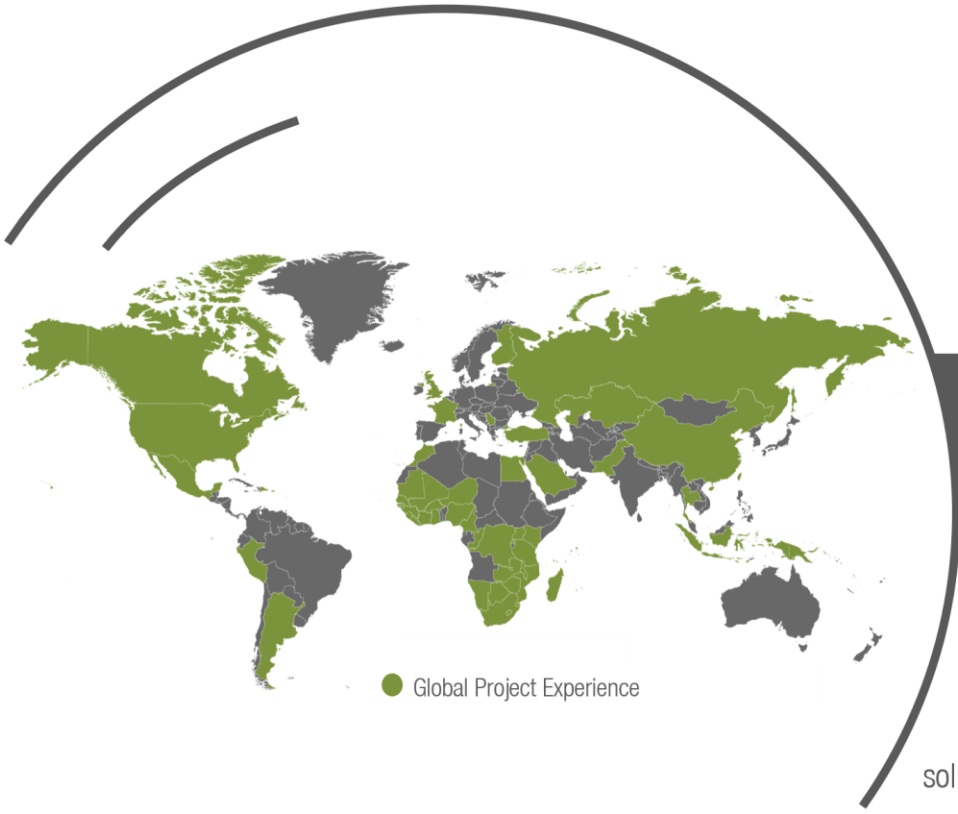

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Environmental Audit of the Sasol Mining Brandspruit Operations near Secunda, Mpumalanga Province`

Compliance Audit Report

Prepared for:
Sasol Mining Pty Ltd - Brandspruit Colliery

Project Number:
SAS75097509

June 2022

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This document has been prepared by Digby Wells Environmental.

Report Type:	Compliance Audit Report
Project Name:	Environmental Audit of the Sasol Mining Brandspruit Operations near Secunda, Mpumalanga Province
Project Code:	SAS7509

Name	Responsibility	Signature	Date
Carol Hooghiemstra	Auditor & Author		March 2022
Puleng Chabeli	Reviewer		April 2022
Mia Smith	OpsCo Reviewer		June 2022

EXECUTIVE SUMMARY

Sasol Mining (Pty) Ltd (Sasol Mining) appointed Digby Wells Environmental (Digby Wells) to undertake an environmental audit at the Brandspruit Colliery (Brandspruit) located near Secunda in the Mpumalanga Province (the Project). The independent external environmental audit was undertaken in terms of Regulation 34 of the Environmental Impact Assessment (EIA) Regulations, 2014 (GN R982 of 04 December 2014, as amended) (the EIA Regulations, 2014) and promulgated under the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA).

A site visit was undertaken on 15 December 2021 to ascertain compliance of operations at Brandspruit with the conditions of its Environmental Management Programme (EMPr). The Brandspruit Main Shaft, Central Workshop and the No. 2 Shaft were the main areas of focus during the site visit.

Brandspruit No. 3E Shaft has been sealed and rehabilitated some time ago. The area was rehabilitated back to agricultural land for grazing purposes. The necessary water management swales were implemented to prevent the erosion of the topsoil. Alien Invasive Plant (AIP) species have been removed and natural vegetation has been established. The property has now been sold to a third party and the environmental liability transferred to the new landowner.

Brandspruit No. 2 Shaft has also been closed and sealed. All infrastructure was removed and the area shaped and vegetated. However, the vegetation establishment at the site was less successful, as the area is characterised by weeds and AIP species.

The Brandspruit EMPr contains a total of 353 management conditions. Based on the current activities undertaken at Brandspruit, this audit is only relevant to the operational and decommissioning phases of the EMPr. The sections in the EMPr relating to construction activities, including clearing of land and construction of infrastructure, were not applicable and were thus not assessed.

The activities that were assessed as part of the external environmental audit include:

- Underground mining;
- Mining related activities; and
- Rehabilitation activities at Brandspruit No. 2 Shaft.

A total of 196 conditions were deemed “Not Applicable” to the operations based on the current activities and observations at the Brandspruit Shafts. A total of 126 conditions were compliant, while the remaining 31 were determined to be non-compliant.

The site achieved an overall compliance rating of 80%.

The following aspects were found to be non-compliant to the conditions of the EMPr:

- High extraction mining of coal underneath water watercourses:
  - No information was made available regarding the undermining of watercourses or whether high extraction mining took place under watercourses or sensitive areas.
- Stormwater management:
  - No clear separation of clean and dirty stormwater management was found at the Brandspruit Central Workshop. At the time of the site visit, it was found that machinery requiring repairs were parked and stored in the clean water area, thus increasing the dirty water area's footprint. This resulted in the contamination of soil and surface runoff from this area and potential run-off of dirty water into the environment;
  - Dirty machinery containing coal and fine coal are similarly stored within areas that are considered clean water areas. The machinery was leaking oil and this would result in the contamination of clean surface water runoff from the site; and
  - The Brandspruit Main Shaft has been closed and is currently being used to store old defunct equipment from other operations. Machines are stored throughout the site. This increases the dirty water management area. No clear separation of clean and contaminated stormwater has been implemented.
- Heritage Resource Management:
  - A number of heritage resources were identified within the Brandspruit Mining Right Area. However, no information was made available on whether archaeological sites were undermined through high extraction mining.
- Monitoring of rehabilitated areas and management of Alien Invasive Plants:
  - No information was made available that the Brandspruit No. 2 Shaft was monitored for establishment of AIP species on a regular basis after it was rehabilitated. At the time of the audit, it was found that weeds and AIPs were found to be the dominant species occurring in the area. Natural vegetation has not been successfully established at the time of the audit.

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1. Introduction

Sasol Mining (Pty) Ltd (Sasol Mining) appointed Digby Wells Environmental (Digby Wells) to undertake an environmental audit at the Brandspruit Colliery (Brandspruit) located near Secunda in the Mpumalanga Province (the Project). The independent external environmental audit was undertaken in terms of Regulation 34 of the Environmental Impact Assessment (EIA) Regulations, 2014 (GN R982 of 04 December 2014, as amended) (the EIA Regulations, 2014) and promulgated under the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA).

2. Project Description

Brandspruit is one of the Block 3 Mines that was developed and operated to provide coal to the Sasol Synfuels Operations (SSO). All mining operations at Brandspruit ceased at the end of 2018 and moved to the new Impumelelo Mine, a replacement mine for Brandspruit. Brandspruit comprised of three shafts, namely Main Shaft, which is located adjacent to the SSO; and No. 3E and No. 2 Shafts which both have been decommissioned and rehabilitated. No. 2 Shaft was the most recent shaft to be closed and rehabilitated in 2020/ 2021 after the necessary Environmental Authorisations (EA) were received.

Equipment and machinery that was reclaimed from the Brandspruit operations are stored at the Main Shaft until the these can be removed from the asset register and sold to a third party.

3. Terms of Reference

Regulation 34 of the EIA Regulations, 2014 sets out the requirements for auditing compliance with an EMPr. This Report is therefore compiled according to Appendix 7 of the EIA Regulations, 2014 as summarised in Table 3-1.

Table 3-1: Contents of the Report as per Appendix 7 of the EIA Regulations, 2014

No.	Requirement	Section of this Report
3 (1) (a)	An environmental audit report prepared in terms of these Regulations must contain (a) details of- i. the independent person who prepared the environmental audit report; and ii. The expertise of independent person that compiled the environmental audit report.	See Section 4.
3 (1) (b)	A declaration that the independent auditor is independent in a form as may be specified by the competent authority.	See Section 4.
3 (1) (c)	An indication of the scope of, and the purpose for which, the environmental audit report was prepared.	See Section 5.
3 (1) (d)	A description of the methodology adopted in preparing the environmental audit report.	See Section 6: Methodology.

No.	Requirement	Section of this Report
3 (1) (e)	An indication of the ability of the EMPr, and where applicable, the closure plan to i. sufficiently provide for the avoidance, management and mitigation of environmental impacts associated with the undertaking and closure of the activity on an on-going basis; ii. Ensure compliance with the provisions of the EA, EMPr, and where applicable, the closure plan.	See Section 7.
3 (1) (f)	A description of any assumptions made, and any uncertainties or gaps in knowledge.	See Section 8.
3 (1) (g)	A description of any consultation process that was undertaken during the course of carrying out the environmental audit report.	Consultation with Site staff was undertaken. No consultation with the public was undertaken as part of this audit.
3 (1) (j)	A summary and copies of any comments that were received during any consultation process; and	
3 (1) (k)	Any other information requested by the competent authority.	None.

Part 3 of Chapter 5 of the EIA Regulations, 2014 relates to auditing and amendment of an EMPr and states the following:

> *34. (4) where the findings of the environmental audit report indicate—*
>
> *(a) insufficient mitigation of environmental impacts associated with the undertaking of the activity; or*
>
> *(b) insufficient levels of compliance with the environmental authorisation or EMPr and, where applicable the closure plan;*
>
> *the holder must, when submitting the environmental audit report to the competent authority, submit recommendations to amend the EMPr or closure plan in order to rectify the shortcomings identified in the environmental audit report.*
>
> *(5) When submitting recommendations in terms of sub-regulation (4), such recommendations must have been subjected to a public participation process, which process has been agreed to by the competent authority and was appropriate to bring the proposed amendment of the EMPr and, where applicable the closure plan, to the attention of potential and registered interested and affected parties, including organs of state which have jurisdiction in respect of any aspect of the relevant activity and the competent authority, for approval by the competent authority.*

It is noted that the findings of this audit report do not result in a recommendation to amend the EMPr and therefore, this audit report is not subject to a public participation process as envisaged in section 34(5).

4. Details and Declaration of the EAP

The external auditor's details is provided in Table 4-1 and was also responsible for preparing the audit report.

Table 4-1: Details of the EAP

Name	Carol Hooghiemstra		
Qualifications	MSc (Environmental Management) ISOQAR Africa: Environmental Management System Internal Lead Auditor (ISO14001:2015)		
Experience	>20		
Company	Digby Wells and Associates (South Africa) (Pty) Ltd		
Telephone:	011 789 9495	**Email:**	carol.hooghiemstra@digbywells.com

I, Carol Hooghiemstra, herewith declare that:

- I act as the independent environmental practitioner in this Audit;
- I will perform the work relating to the Audit in an objective manner, even if this results in views and findings that are not favourable to the Holder;
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting environmental audits, including knowledge of the Act, Regulations and any guidelines that have relevance to the activity;
- I have no, and will not engage in, conflicting interests in the undertaking of the audit;
- declare that all the information furnished by me in this application are true and correct;
- I will perform all other obligations as expected from an environmental assessment practitioner in terms of the Regulations; and
- I realise that a false declaration is an offence in terms of section 24F of the Act.

Signature of the EAP: 

Date: 21 March 2022

5. Scope and Purpose of the Audit

An Environmental Audit of the EMPr must determine compliance with the conditions of the EMPr and its appropriateness and adequacy through on-going assessment. Regulation 34 of the EIA Regulations, 2014 requires that the holder of an environmental authorisation must, for the period during which the environmental authorisation and EMPr and where applicable the closure plan, remain valid—

(a) Ensure that the compliance with the conditions of the environmental authorisation and the EMPr, and where applicable the closure plan, is audited; and

(b) Submit an environmental audit report to the relevant competent authority.

The scope of this Environmental Audit included a documentation review and site assessment to determine compliance of Brandspruit against the conditions set out in the EMPr that was approved by the Department of Mineral Resources and Energy (DMRE) in 2012. The audit period was for January 2021 to December 2021

The main objectives of the Environmental Audit report are therefore to:

- Report on the level of compliance with the conditions of the EMPr and the extent to which the avoidance, management and mitigation measures provided for in the EMPr are implemented;
- Identify and assess any new impacts and risks as a result of undertaking the activity;
- Evaluate the effectiveness of the EMPr;
- Identify shortcomings in the EMPr; and
- Identify the need for any changes to the avoidance, management and mitigation measures provided for in the EMPr.

6. Methodology

The methodology adopted during the undertaking of the Environmental Audit is in accordance with Regulation 34 of the EIA Regulations, 2014. This section describes the tasks undertaken during the Project.

6.1. Audit Preparation

Sasol Mining has developed an extensive audit checklist that was provided and used to audit the Brandspruit operations. This will form part of their Environmental Management System that has been developed and implemented throughout Sasol Mining. The audit checklist was used as a pro-forma checklist by the auditor in preparation for the audit. The outcomes of the audit will be uploaded into IsoMetrix software, which is used to monitor compliance at the Sasol Mining operations. This will ensure that the outcome of the audits can be compared with the previous audits and ensure that the high risks identified in the EMPr be managed and addressed.

6.2. Audit Initiation Meeting

The Environmental Audit was initiated at Brandspruit on 15 December 2021. The auditor's details and the Sasol Mining employees interviewed during the site assessment are listed in Table 6-1 and Table 6-2, respectively.

Table 6-1: Auditor's Details

Auditor	Qualifications	Involvement in project	Experience
Carol Hooghiemstra	MSc Environmental Management	Auditor	More than 20 years

Table 6-2: Interviewed Personnel during the Compliance Audit

Name	Position or Department
Thabelo Ramakuwela	Environmental Practitioner for Brandspruit Central Workshops
Jacques du Plessis	Manager Closure

6.3. Site Assessment and Interviews

Digby Wells conducted a site assessments on 15 December 2021 at the Brandspruit Central Workshops, the Main Shaft and No. 2 Shaft. During the site assessment, the audit checklist that was provided was used to assess whether the current mining activities comply with the commitments of the EMPr. Photographic evidence was taken to support the observations made and are included in Section 10 of this report.

6.4. Document Review

Digby Wells conducted a review of the relevant documents provided (where documents were made available) during and after the site assessment.

The following documents were reviewed as part of the process:

- The Brandspruit EMPr, 2010;
- Signed approval of the EMPr, dated 2012;
- Alien Invasive Plant (AIP) Management Plan;
- Biomonitoring Assessment: Block 3 Mines Dry Season Survey ,2020;
- Sasol Mining (Pty) Ltd Integrated Water and Waste Management Plan (IWWMP) Update, 2019 -2020;
- Sasol South Africa (Pty) Ltd – SHE Risked Based Auditing Brandspruit: Internal Water Use Licence Audit Report;

- Subsidence Mitigation Designs General Arrangement Plan: Brandspruit subsidence compiled by Jones and Wagener Engineering and Environmental Consultants;
- Method Statement for the Remediation of Subsidence in Embalenhle Project;
- Technique used for the subsidence rehabilitation - Proof of rehabilitation of subsidence;
- Consulting Environmental Scientists Water Quality Monitoring Report, November 2020;
- SMCW/DD Training schedule for 03 -06 May 2022;
- Pictures of areas that show free drainage of rehabilitated subsided areas;
- Rehabilitation strategy for Brandspruit Decommissioning and Closure, 2018;
- Block 3 Water Resource Monitoring for the period, January 2020 – June 2020.

6.5. Environmental Audit and Reporting

Compliance was assessed by determining the total number of conditions that Brandspruit must comply with, excluding those conditions that are deemed to be not applicable. Where conditions are identified as “not-applicable” reasons for excluding the condition from the assessment are provided.

Compliance with the commitments contained in the EMPr was rated using the scoring system described in Table 6-3. The over-all compliance score is then calculated as a percentage of the total possible score.

Table 6-3: Evaluation Criteria

Non-Conformance (NC)	These are areas of verified non-compliance as observed during the site visit to stated commitments or EMPr conditions.
Conformance (C)	These are areas of complete fulfilment of the stated commitment/requirement
Not Applicable / Relevant or Noted	The Commitment stated in the EMPr is not relevant to the operations at this phase of the Activity or there is no action required at this time.

7. Evaluation of the Relevance and Effectiveness of the EMPr

Based on the findings of the environmental audit of the EMPr, as well as site observations, the following deductions can be made:

The EMPr provides comprehensive requirements for achieving environmental objectives and clear monitoring and reporting requirements.

Due to the closure and the rehabilitation of No. 2 Shaft and the Main Shaft, the majority of the conditions during the operational phase is not applicable anymore. However, the Main Shaft infrastructure (except for the headgear) will continue to be used by the Brandspruit Central

Workshop for additional work space and to store and park equipment, as well as the administrative buildings that are still in use.

8. Assumptions, Uncertainties and Effectiveness of the EMPr

The following assumptions, uncertainties and gaps in knowledge are applicable to this Environmental Audit:

- No. 3E shaft has been closed and rehabilitated since 2016, while No. 2 Shaft and the Main Shaft stopped operations during November 2018. The land on which No. 3E Shaft was situated has also now been sold to a third party;
- No. 2 Shaft has been closed and rehabilitated. However, the successfulness of the vegetation establishment in the area is questioned due to the presence of AIP species found at the time of the audit;
- The findings recorded in this Environmental Audit Report are limited to the observations made during the desktop assessment and the site visits undertaken;
- The audit period is from January 2021 to November 2021;
- This audit was undertaken in terms of the 2012 EMPr and the IsoMetrix audit checklist provided by Sasol Mining; and
- The scope of work specifically excludes an assessment of compliance with the Water Use Licence (WUL). This has been undertaken in June 2021 and was reported on separately.

9. Financial Provision and Rehabilitation

The financial provision is updated on an annual basis by Jones and Wagener. The 2021 financial provisions indicated that a cost estimate was calculated at R 6,798,452.

10. Site Observations

A site visit was undertaken on 15 December 2021 by Carol Hooghiemstra accompanied by Thabelo Ramakuwela and Jacques du Plessis of Sasol Mining. The Brandspruit Main Shaft, Central Workshop and the No. 2 Shaft were the main areas of focus during the site visit.

Brandspruit 3E Shaft has been sealed and rehabilitated some time ago. The area was rehabilitated back to agricultural land for grazing purposes. The necessary water management swales were implemented to prevent erosion of topsoil. AIP species have been removed and natural vegetation has been established. The property has now been sold to a third party.

Brandspruit No. 2 Shaft has also been closed and sealed. All infrastructure was removed and the area shaped and vegetated. However, vegetation establishment at the site was less successful as the area is characterised by weeds and AIP species.

The following observations were made while on site for each of the shaft areas.

10.1. Main Shaft

The Main Shaft is located on the Evander Standerton Road (R546) adjacent to the Sasol Synfuels operations.

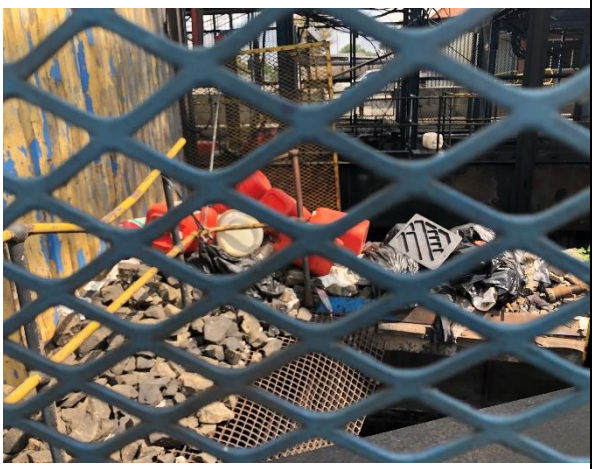
Figure 10-1: Brandspruit Main Shaft

10.1.1. Infrastructure

The Brandspruit Main Shaft was backfilled with construction material and ash to prevent the accumulation of methane in the shaft void (Figure 10-1). The Shaft head gear has not been removed. At the time of the audit, it was noticed that all sorts of general waste was disposed of into the shaft (Figure 10-2) as a result of poor controls and housekeeping. The following observations were made at the time of the audit:

- No infrastructure has been removed from the site as part of the decommissioning and closure of the site;
- The bulk oil storage area containing the storage tanks is still in place, but is not currently in use and has not been rehabilitated;
- Administration buildings and office blocks are still in use by Engineering and Operational Services of Sasol Mining;
- The workshops are used to store and repair redundant and old machinery and equipment from other operational mines; and
- Good housekeeping was being implemented throughout the area.

Bulk oil storage tanks



Main shaft infrastructure

Builders Material backfilled into the shaft void

Figure 10-2: Bulk Storage Tanks and Shaft at the Brandspruit Main Shaft

The shaft area is also used for the storage of old equipment that is earmarked to be sold once it is removed from the mine's asset register. Due to the large number of machinery and equipment that needs to be stored, machinery and equipment is being stored in unpaved areas. In general, housekeeping in the area is commendable and the necessary spillage containment practices are in place.

Figure 10-3: Old and Redundant Equipment Stored at the Brandspruit Main Shaft

10.1.2. Stormwater Management

No clear separation of clean and dirty stormwater is implemented. Due to the large number of old and redundant equipment stored on site, some of the equipment is stored in areas that could be considered “clean areas”, as shown in Figure 10-3; and in unpaved areas.

Runoff from the site is contained to a trench that runs on the outside of the buildings and then into a sump. When this sump is full, the Environmental Practitioner arranges for a service provider to clean out the sump and remove the silt and water to an appropriate licenced facility. It is not clear for what storm event the sump was designed, but no incidents were recorded where the sump overflowed into the environment during rainfall events. At the time of the audit in December 2021, grass around the sump was long and growing into the trench. However, the service provider was in the process of cutting the grass.

	 
Stormwater trench conveying contaminated water to the sump	Sump contains runoff from the surrounding area.

Figure 10-4: Stormwater Trench and Sump at Main Shaft

10.1.3. Parking and Storage of Old Equipment

Old equipment (Figure 10-5) that could not be used when Brandspruit mining operations moved to the Impumelelo Mine and other redundant equipment from the other mines are being stored at the Main Shaft. Due to the large number of equipment, it is necessary to store the equipment in unpaved areas. Some of the machines have been scrapped and removed from the mine's asset register and was numbered with spray paint.

Figure 10-5: Old Equipment Stored at Main Shaft

Dirty machines shown in Figure 10-6 were received from various other mines and were stored in this area, with no mitigation measures in place. This resulted in the material covering the machines being washed down during rainstorm events and contamination of surface water runoff. Machinery should not be transported to at stored at the Main Shaft if these are dirty.

Figure 10-6: Dirty Machinery Stored at the Main Shaft

10.1.4. Waste Management Area

Although the Main Shaft is not operational with the exception of some of the workshops, the waste management area (shown in Figure 10-7) is well maintained and was upgraded after the 2019 Environmental Audit. Each waste stream is stored in an area which is labelled and demarcated for each of the specific wastes streams.

Figure 10-7: Waste Management Area

10.2. The Central Brandspruit Workshop

Engineering Services (ESS) shown in Figure 10-8 are responsible for operating and managing the Central Workshops within the Sasol Mining Complex The Central Workshop is used to repair machinery from Sasol Mining operations, where these services are not available on the mines. Various workshops are used to maintain machinery, e.g., painting booth, boiler workshop, etc. In general, the housekeeping is of a very high standard and people are dedicated to cleaning of spillages. The EMPr requires that spillages be cleaned as soon as possible. Evidence was found at the time of the site visit that employees attend to spillages as soon as possible.

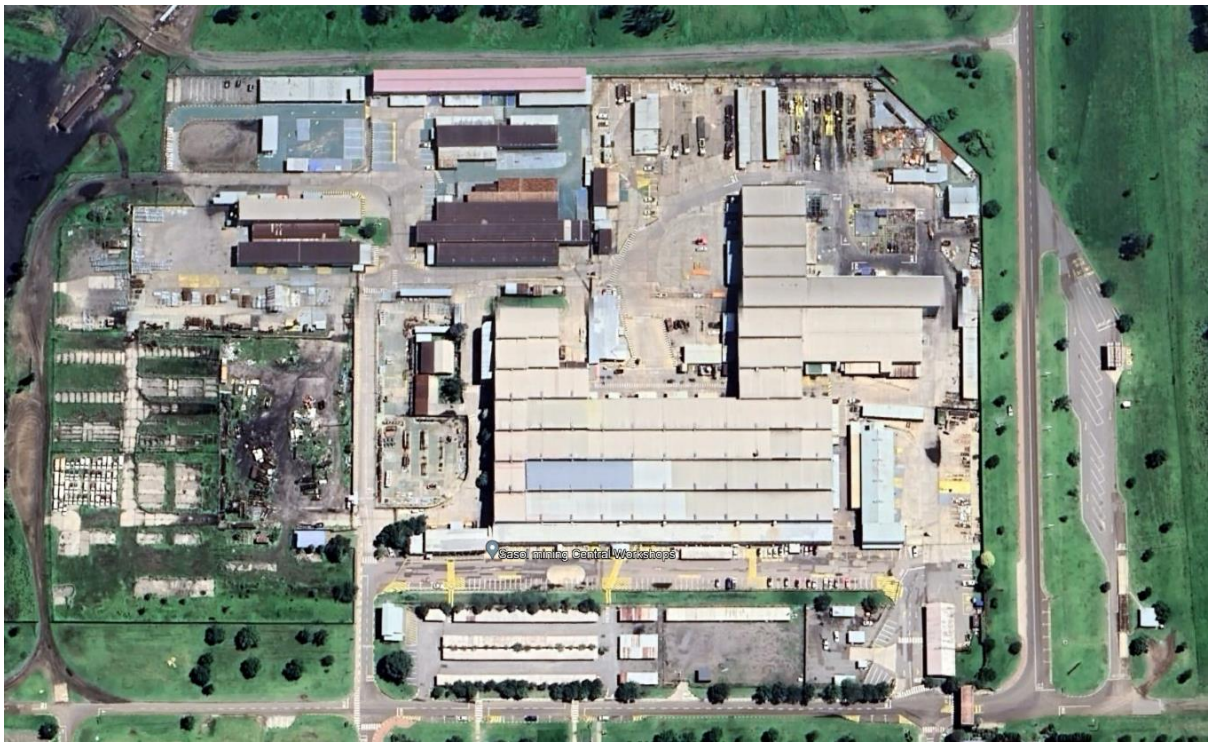


Figure 10-8: Brandspruit Central Workshop

10.2.1. Infrastructure

The infrastructure at the Central Workshops comprise of workshops, concreted and paved parking areas, a sump collecting water from the wash bay and a waste storage area, as shown in Figure 10-9.

Figure 10-9: Central Workshop

10.2.2. Stormwater Management

There is no clear separation of clean and dirty stormwater at the Central Workshop. Due to the challenge of not being able to contain contaminated runoff to the immediate area from the Central Workshop, the area is managed by cleaning any spillages as soon as it happens. All spillages are cleaned immediately and disposed of according to the Standard Operating Procedure (SOP). At the time of the audit, it was noticed that two machines (shuttle cars) that required repairs were parked in an area that was demarcated as a clean water area. As indicated in Figure 10-10, these machines were leaking oil and the necessary drip trays were not used to contain oil leaks. The potential therefore exist that surface runoff can be contaminated by hydrocarbons and will flow into the environment through the outflow shown in Figure 10-10.

Figure 10-10: Machines Requiring Repairs Stored in Clean Area

In an attempt to manage stormwater on site, the outflows in the walls were sealed with steel plates and spill sorb socks and mattresses; and booms were placed in front of these steel plates to contain any hydrocarbon contamination. Refer to Figure 10-11.

Figure 10-11: Steel Plates Used to Seal the Outflows in the Wall

Machinery received from other mines are not necessarily cleaned and were found to be covered with coal fines. The machines are washed prior to repairs being undertaken. However, during transportation, the machines are a source of contamination. People were appointed to clean the area of spillages of coal and hydrocarbons on a continuous basis to prevent contaminated runoff from leaving the site and to ensure good housekeeping practices are implemented.

10.2.3. Storage of Hazardous Substance

Hazardous substances are stored in an allocated area within each of the workshops and paint booths shown in Figure 10-12. These substances are stored in a lockable, bunded store with the Material Safety Data Sheet (MSDS) readily available. However, it is recommended that the MSDS file are reviewed to ensure the correct MSDS for a specific product is included.

Storage of hazarduous substances witin the workshops

Figure 10-12: Storage of Hazardous Substances

10.2.4. Oil Separator

All wash water from the wash bay is directed to the central oil separator (Figure 10-13). This oil separator is not functioning optimally and the Environmental Practitioner was in discussion with a number of service providers at the time of the audit to determine the best way forward. The separator's capacity is not sufficient to manage all the water generated at the wash bay. The final sump is cleaned out as and when required by a service provider. The waste is then disposed of to an appropriate licenced landfill facility. The old oil is recovered and is removed from site by a service provider. The Safe Disposal Certificates for this was made available.

Figure 10-13: Oil Separator

10.2.5. Waste Management

Figure 10-14 shows that good waste management practices are implemented at the Central Workshop. Waste is removed and disposed of to a central waste management area. The area is clearly demarcated for the various waste streams. A service provider is appointed to remove the hazardous waste and old oil. General waste is removed by Sasol Reclamation and disposed to the Charlie 1 landfill site.

Figure 10-14: Brandspruit Central Workshop Waste Management Area

10.3. Brandspruit No. 2 Shaft

Brandspruit No. 2 Shaft was closed in 2020/2021 and rehabilitated. The rehabilitation entailed the following:

- All infrastructure was removed;
- The shaft was backfilled, sealed and made safe;
- Surfaces were levelled and contoured;
- The area was covered with subsoil and topsoil; and

- The soil was seeded.

Although the area shown in Figure 10-15 was vegetated, the following actions were not successfully completed:

- Although vegetation was established, the vegetation was not characteristic of local indigenous vegetation, but comprised of weeds and AIP species. Thus the re-establishment of vegetation within the previously utilised land use areas was not successful; and
- No proof of continuous monitoring and auditing of rehabilitation was available at the time of the audit to ensure that rehabilitation is sufficiently successful.

Figure 10-15: Brandspruit No. 2 Shaft

The area was rehabilitated to form part of Rhino Lodge, a tourist facility, and therefore the land capability would be grazing for game farming.

10.4. Brandspruit No. 3E Shaft

Figure 10-16 shows that Brandspruit No. 3 E Shaft has been closed and rehabilitated. This property has also been sold to a third party. All rehabilitation was completed and maintenance was undertaken to address erosion and AIP proliferation.

Figure 10-16: Brandspruit No. 3E Shaft

10.5. Alien Invasive Plan

An AIP management plan was provided for Brandspruit and the report identifies the locations where AIPs have proliferated as well as when and where these AIP were or will be removed. However no proof of monitoring the status on the removal of AIP species were provided for the Brandspruit No. 2 Shaft at the time of the audit.

11. Monitoring

Brandspruit is located within the Sasol Synfuels operational area and adjacent to the Sasol Synfuels plant. Sasol Synfuels and Central Environmental team is responsible for the monitoring programmes at all the Block 3 water resources.

11.1. Surface and Groundwater Monitoring

GPT Consulting Environmental Scientists (GPT) were appointed to undertake the Block 3 Water Quality Monitoring. The November 2020 Monitoring report was made available at the time of the audit.

Groundwater levels and qualities were measured upstream and downstream of the No. 2 Shaft. The report stated that there were no large scale contamination of the aquifer as a result of the irrigation of treated effluent in the vicinity where the Pollution Control Dams (PCDs). The monitoring report showed that there are specific monitoring points around Brandspruit. However, RESM 9 is situated downstream in the Brandspruit.

RESM 9 reflects the water quality in the Brandspruit just before the confluence with the Bossiesspruit. This point is monitored by Sasol Synfuels on a monthly basis. Impacts noticed at this point cannot necessarily be traced back to Brandspruit operations, since other anthropogenic impacts exist in this area. The Brandspruit runs from the south of the operational area in a northernly direction between the Ash Disposal Facilities of Sasol Synfuels, Quarry Dam, Reclamation yard and the Coal Stockpile Yard.

11.2. Biomonitoring

Wet-Earth Eco Specs (Pty) Ltd is responsible to conduct biomonitoring for the Block 3 Mines. This includes the Brandspruit, that flows past Brandspruit operations. Monitoring points are

located upstream from Brandspruit Main Shaft and serves as background values for Sites BS2 and BS3.

12. Audit Findings

The Brandspruit EMPr contains a total of 353 management conditions. Due to the present activities at Brandspruit this audit is only relevant to the operational and decommissioning phase. The sections in the EMPr relating to the construction activities including clearing of land and construction of infrastructure were found not to be relevant and were not assessed as part of the audit.

The activities which were assessed as part of the external environmental audit include:

- Underground mining;
- Mining related activities; and
- Rehabilitation activities at Brandspruit No. 2 Shaft.

A summary of the compliance against the EMPr commitments is shown in Table 12-1 below. The detailed audit findings are contained in the Compliance Table attached as Appendix A.

Table 12-1: Compliance Rating – EMPr Commitments

	Total Number of Conditions	Total Compliances	Total Non-Compliances	Total Not Applicable	Total possible score (No of conditions, less No of N/A)	Score (%)
EMPr	353	126	31	196	157	**80**

The findings raised (Appendix A) can be divided into several categories:

- High extraction mining of coal underneath water watercourses:
  - No information was made available regarding the undermining of watercourses or whether high extraction mining took place under watercourses or sensitive areas.
- Stormwater management:
  - No clear separation of clean and dirty stormwater management was found at the Brandspruit Central Workshop. At the time of the site visit, it was found that machinery requiring repairs were parked and stored in the clean water area, thus increasing the dirty water area's footprint. This resulted in the contamination of soil and surface runoff from this area and potential run-off of dirty water into the environment;

- Dirty machinery containing coal and fine coal are similarly stored within areas that are considered clean water areas. The machinery was leaking oil and this would result in the contamination of clean surface water runoff from the site; and
- The Brandspruit Main Shaft has been closed and is currently being used to store old defunct equipment from other operations. Machines are stored throughout the site. This increases the dirty water management area. No clear separation of clean and contaminated stormwater has been implemented.

- Heritage Resource Management:
  - A number of heritage resources were identified within the Brandspruit Mining Right Area. However, no information was made available on whether archaeological sites were undermined through high extraction mining.
- Monitoring of rehabilitated areas and management of Alien Invasive Plants:
  - No information was made available that the Brandspruit No. 2 Shaft was monitored for establishment of AIP species on a regular basis after it was rehabilitated. At the time of the audit, it was found that weeds and AIPs were found to be the dominant species occurring in the area. Natural vegetation has not been successfully established at the time of the audit.

13. Conclusions and Recommendations

The site achieved an overall compliance rating of 80%.

Based on the findings the following recommendations are made:

- The Main Shaft Area and the Brandspruit Central Workshop must be managed in such a way that machinery is stored and parked within a dirty area;
- Machinery moved to the Main Shaft prior to the selling of the equipment must be cleaned from any fine coal or oil leaks to prevent the contamination of soil and potentially surface water runoff;
- The status of the heritage resources that have been undermined must be determined, should any of these be damaged and or impacted this must be addressed accordingly; and
- AIPs to be removed at Brandspruit No. 2 Shaft and where necessary, the area should be seeded with an indigenous seed mix applicable to the area.

Appendix A: Compliance Table

Compliance Checklist

This Appendix presents the detailed audit findings against each condition of the Operational Phase EMPr.

Table: Assessment of Compliance to the Operational Requirements of the EMPr

Company Audited	Brandspruit Colliery
Areas audited	Brandspruit Main Shaft Brandspruit 2 Shaft Central Workshops Brandspruit 3E
Representative from Company	Thabelo Ramakuwela Jacques du Plessis
Audit date	15 December 2021
Auditor from Digby Wells	Carol Hooghiemstra

C	Compliant- Brandspruit has fulfilled all requirements relevant to the EMPr condition.
NC	Non-Compliance - Brandspruit is not in compliance with the WUL condition.
NA	Not applicable - The condition is not applicable to the current mining operations

EMP Phase	Authorisation Activity	Risk Source	Env Aspect	Potential Impact	Condition	Audit Compliance Status	*Comment*
Pre-Construction Phase | Construction Phase | Operational Phase | Decommissioning Phase | Closure Phase | Post Closure Phase	Approval Conditions	External Threats -> Environmental Aspect -> Non-compliance (EMP, WUL)	Legal	Legal non-compliance	1. This approval does not purport to absolve Sasol Mining from its common law obligations towards the owner of the surface of land affected.	C	From the Jones and Wagner Stability Report that was compiled, 18 sites where subsidence has occurred were identified that required to be rehabilitated. Proof of rehabilitation was provided in the form of before and after photos.
Pre-Construction Phase | Construction Phase | Operational Phase | Decommissioning Phase | Closure Phase | Post Closure Phase	Approval Conditions	External Threats -> Environmental Aspect -> Non-compliance (EMP, WUL)	Legal	Legal non-compliance	2. This approval may be amended or withdraw at any stage for non-compliance and providers no relief from the provisions of any other relevant statutory or contractual obligations whatsoever	C	Noted. Brandspruit undertakes a number of audits, including a bi-annual internal legal audit. The approval was not amended or withdrawn, nor is there a need to withdraw or amend the authorisation.
Pre-Construction Phase | Construction Phase | Operational Phase | Decommissioning Phase | Closure Phase | Post Closure Phase	Approval Conditions	External Threats -> Environmental Aspect -> Non-compliance (EMP, WUL)	Legal	Legal non-compliance	3. Environmental management must conform to the Environmental Management Programme approved	C	External audits against the conditions of the EMPr are undertaken on an annual basis to determine whether environmental management complies with the EMPr.

EMP Phase	Authorisation Activity	Risk Source	Env Aspect	Potential Impact	Condition	Audit Compliance Status	*Comment*
Pre-Construction Phase | Construction Phase | Operational Phase | Decommissioning Phase | Closure Phase | Post Closure Phase	Approval Conditions	External Threats -> Environmental Aspect -> Non-compliance (EMP, WUL)	Legal	Legal non-compliance	4. Mining activities must conform to all relevant legislation, especially the National Water Act, 1998, as well as the Mine Health and Safety Act, 1996 and such other conditions as may be imposed by the Regional Manager of any other official of this office, duly authorized thereto	C	External Audits are undertaken to determine compliance with all the relevant legislation, as follows: - An External Water Use Licence Audit was undertaken during 2021 to determine compliance of Brandspruit with the conditions set out in the WUL for Block 3. Internal legal audits are undertaken every second year. Annual internal audits are undertaken to determine compliance against the MHSA.
Pre-Construction Phase | Construction Phase | Operational Phase | Decommissioning Phase | Closure Phase | Post Closure Phase	Approval Conditions	External Threats -> Environmental Aspect -> Non-compliance (EMP, WUL)	Legal	Legal non-compliance	5. Rehabilitation of the disturbed surface caused by mining activities at all times must comply with the said Environmental Management Programme amendment.	C	Information provided on the rehabilitation technique that is followed when subsidence is rehabilitated and the rehabilitation done at Embalenhle Townchip complies with what is noted in the EMPr.
Pre-Construction Phase | Construction Phase | Operational Phase | Decommissioning Phase | Closure Phase | Post Closure Phase	Approval Conditions	External Threats -> Environmental Aspect -> Non-compliance (EMP, WUL)	Legal	Legal non-compliance	6. The financial provision provided in terms of Regulation 54(2) of the Act must be annually adjusted to conform to the above-mentioned mining activities.	C	Financial Provision is updated on an annual basis by Jones and Wagner Consulting Engineers. The Jones and Wagner Report for 2022 was provided.
Pre-Construction Phase | Construction Phase | Operational Phase | Decommissioning Phase | Closure Phase | Post Closure Phase	Approval Conditions	External Threats -> Environmental Aspect -> Non-compliance (EMP, WUL)	Legal	Legal non-compliance	7. A performance assessment, monitoring, and evaluation report must be submitted annually to this office or as determined by the Regional Manager, or at any other time that an officer of this office duly authorized thereto requests.	NC	An audit for 2020 and 2021 was not completed, since Brandspruit is no longer operational. This audit includes the annual audits for 2020 to 2022. However annual audits need to be undertaken. No audit was undertaken during 2020.
Pre-Construction Phase | Construction Phase | Operational Phase | Decommissioning Phase | Closure Phase | Post Closure Phase	Approval Conditions	External Threats -> Environmental Aspect -> Non-compliance (EMP, WUL)	Legal	Legal non-compliance	8. Any alteration or deviation from the plan must be reported to the Regional Manager for his/her approval or consideration.	N/A	All mining activities stopped at Brandspruit in 2018. Responsibility for the management of the decommissioned and closed shafts were moved to the Closure Department of Sasol Mining, who will now be responsible for the management of the decommissioned and closed shafts and infrastructure.
Pre-Construction Phase | Construction Phase | Operational Phase | Decommissioning Phase | Closure Phase | Post Closure Phase	Approval Conditions	External Threats -> Environmental Aspect -> Non-compliance (EMP, WUL)	Legal	Legal non-compliance	9. A copy of the approved Environmental Management Programme must always be available on the mining premises for inspection by duly authorized officers.	C	The EMPr is available on SharePoint.
Operational Phase	Clearing of land during operational phase for construction of additional infrastructure, ventilation shafts that may have impact on operational phase	Land -> Environmental Aspect -> Geology	Geology	No anticipated impacts	7.2.1.2.1 N/A	N/A	Not applicable. All mining at Brandspruit Colliery has stopped and the shafts have been closed since October 2018. Therefore, no clearing of land has been taking place since December 2018.

EMP Phase	Authorisation Activity	Risk Source	Env Aspect	Potential Impact	Condition	Audit Compliance Status	*Comment*
Operational Phase	Clearing of land during operational phase for construction of additional infrastructure, ventilation shafts that may have impact on operational phase	Land -> Environmental Aspect -> Topography	Topography	No anticipated impacts	7.2.1.2.2 N/A	N/A	Not applicable. All mining at Brandspruit Colliery has stopped and the shafts have been closed since October 2018. Therefore, no clearing of land has been taking place since December 2018.
Operational Phase	Clearing of land during operational phase for construction of additional infrastructure, ventilation shafts that may have impact on operational phase	Land -> Environmental Aspect -> Soils	Soil	Soil erosion	7.2.1.2.3 Ensure stockpiles are vegetated.	N/A	Not applicable. All mining at Brandspruit Colliery has stopped and the shafts have been closed since October 2018. Therefore, no clearing of land has been taking place since December 2018.
Operational Phase	Clearing of land during operational phase for construction of additional infrastructure, ventilation shafts that may have impact on operational phase	Land -> Environmental Aspect -> Soils	Soil	Soil erosion	7.2.1.2.4 Ensure that the gradient of stockpiles is 1:3 or less (shallower) so as to allow for the establishment of vegetation on all stockpiles.	N/A	Not applicable. All mining at Brandspruit Colliery has stopped and the shafts have been closed since October 2018. Therefore, no clearing of land has been taking place since December 2018.
Operational Phase	Clearing of land during operational phase for construction of additional infrastructure, ventilation shafts that may have impact on operational phase	Land -> Environmental Aspect -> Soils	Soil	Soil erosion	7.2.1.2.5 Limit vehicle movement on stockpiles to prevent compaction of soils.	N/A	Not applicable. All mining at Brandspruit Colliery has stopped and the shafts have been closed since October 2018. Therefore, no clearing of land has been taking place since December 2018.
Operational Phase	Clearing of land during operational phase for construction of additional infrastructure, ventilation shafts that may have impact on operational phase	Land -> Environmental Aspect -> Soils	Soil	Soil erosion	7.2.1.2.6 Regularly inspect and maintain stockpiles to ensure timeous rehabilitation of erosion from side slopes.	N/A	Not applicable. All mining at Brandspruit Colliery has stopped and the shafts have been closed since October 2018. Therefore, no clearing of land has been taking place since December 2018.
Operational Phase	Clearing of land during operational phase for construction of additional infrastructure, ventilation shafts that may have impact on operational phase	Land -> Environmental Aspect -> Soils	Soil	Compaction of soil	7.2.1.2.7 Limit vehicle movement on stockpiles to prevent compaction of soils.	N/A	Not applicable. All mining at Brandspruit Colliery has stopped and the shafts have been closed since October 2018. Therefore, no clearing of land has been taking place since December 2018.

EMP Phase	Authorisation Activity	Risk Source	Env Aspect	Potential Impact	Condition	Audit Compliance Status	*Comment*
Operational Phase	Clearing of land during operational phase for construction of additional infrastructure, ventilation shafts that may have impact on operational phase	Land -> Environmental Aspect -> Soils	Soil	Compaction of soil	7.2.1.2.8 Restrict vehicle access to stockpiles.	N/A	Not applicable. All mining at Brandspruit Colliery has stopped and the shafts have been closed since October 2018. Therefore, no clearing of land has been taking place since December 2018.
Operational Phase	Clearing of land during operational phase for construction of additional infrastructure, ventilation shafts that may have impact on operational phase	Land -> Environmental Aspect -> Soils	Soil	Compaction of soil	7.2.1.2.9 Ensure designated pathways are allocated for vehicle movement.	N/A	Not applicable. All mining at Brandspruit Colliery has stopped and the shafts have been closed since October 2018. Therefore, no clearing of land has been taking place since December 2018.
Operational Phase	Clearing of land during operational phase for construction of additional infrastructure, ventilation shafts that may have impact on operational phase	Land -> Environmental Aspect -> Land use and land capability	Land capability	No anticipated impacts	7.2.1.2.10 No anticipated impacts	N/A	Not applicable. All mining at Brandspruit Colliery has stopped and the shafts have been closed since October 2018. Therefore, no clearing of land has been taking place since December 2018.
Operational Phase	Clearing of land during operational phase for construction of additional infrastructure, ventilation shafts that may have impact on operational phase	Land -> Environmental Aspect -> Land use and land capability	Land use	No anticipated impacts	7.2.1.2.11 No anticipated impacts	N/A	Not applicable. All mining at Brandspruit Colliery has stopped and the shafts have been closed since October 2018. Therefore, no clearing of land has been taking place since December 2018.
Operational Phase	Clearing of land during operational phase for construction of additional infrastructure, ventilation shafts that may have impact on operational phase	Biological -> Environmental Aspect -> Plant life / Vegetation	Vegetation	Establishment of invader species	7.2.1.2.12 Check all revegetated and surrounding areas for any invader plant species on a regular basis.	C	Although all mining has stopped at Brandspruit Colliery and has been closed since October 2018 and no clearing of land has been taking place since December 2018 an alien invasive management plan is still in place and being implemented
Operational Phase	Clearing of land during operational phase for construction of additional infrastructure, ventilation shafts that may have impact on operational phase	Biological -> Environmental Aspect -> Plant life / Vegetation	Vegetation	Establishment of invader species	7.2.1.2.13 Remove any invader plant species.	C	Although all mining has stopped at Brandspruit Colliery and has been closed since October 2018 and no clearing of land has been taking place since December 2018 an alien invasive management plan is still in place and being implemented

EMP Phase	Authorisation Activity	Risk Source	Env Aspect	Potential Impact	Condition	Audit Compliance Status	*Comment*
Operational Phase	Clearing of land during operational phase for construction of additional infrastructure, ventilation shafts that may have impact on operational phase	Biological -> Environmental Aspect -> Plant life / Vegetation	Vegetation	Establishment of invader species	7.2.1.2.14 Ensure stockpiles are vegetated with flora indigenous to the study area.	N/A	Not Applicable All mining has stopped at Brandspruit Colliery and has been closed since October 2018 and therefore no clearing of land has been taking place since December 2018. No stockpiles were noticed at the time of the audit
Operational Phase	Clearing of land during operational phase for construction of additional infrastructure, ventilation shafts that may have impact on operational phase	Biological -> Environmental Aspect -> Plant life / Vegetation	Vegetation	Minimisation of physiological processes	7.2.1.2.15 Implement a dust suppression programme on all disturbed soil areas where dust can be generated due to vehicle movement or wind within the surface land use area.	N/A	Not applicable. All mining at Brandspruit Colliery has stopped and the shafts have been closed since October 2018. Therefore, no clearing of land has been taking place since December 2018.
Operational Phase	Clearing of land during operational phase for construction of additional infrastructure, ventilation shafts that may have impact on operational phase	Biological -> Environmental Aspect -> Animal life	Animal life	No anticipated impacts	7.2.1.2.16 No anticipated impacts	N/A	Not applicable. All mining at Brandspruit Colliery has stopped and the shafts have been closed since October 2018. Therefore, no clearing of land has been taking place since December 2018.
Operational Phase	Clearing of land during operational phase for construction of additional infrastructure, ventilation shafts that may have impact on operational phase	Water -> Environmental Aspect -> Surface water	Surface water	Decrease in water quality	7.2.1.2.17 Suppress dust on cleared land.	N/A	Not applicable. All mining at Brandspruit Colliery has stopped and the shafts have been closed since October 2018. Therefore, no clearing of land has been taking place since December 2018.
Operational Phase	Clearing of land during operational phase for construction of additional infrastructure, ventilation shafts that may have impact on operational phase	Water -> Environmental Aspect -> Surface water	Surface water	Decrease in water quality	7.2.1.2.18 Prevent erosion of loose particles by vegetating cleared land / stockpiles when no longer utilized.	N/A	Not Applicable All mining has stopped at Brandspruit Colliery and has been closed since October 2018 and therefore no clearing of land has been taking place since December 2018. No stockpiles were noticed at the time of the audit.
Operational Phase	Clearing of land during operational phase for construction of additional infrastructure, ventilation shafts that may have impact on operational phase	Water -> Environmental Aspect -> Ground water	Ground water	Decrease in groundwater recharge	7.2.1.2.19 Prevent compaction of soils by limiting vehicle movement to prescribed pathways.	N/A	Not applicable. All mining at Brandspruit Colliery has stopped and the shafts have been closed since October 2018. Therefore, no clearing of land has been taking place since December 2018.

EMP Phase	Authorisation Activity	Risk Source	Env Aspect	Potential Impact	Condition	Audit Compliance Status	*Comment*
Operational Phase	Clearing of land during operational phase for construction of additional infrastructure, ventilation shafts that may have impact on operational phase	Dust / Respirable coal and silica dusts -> Environmental Aspect -> Air Quality (Dust)	Air quality	Dust generation	7.2.1.2.20 Suppress dust on cleared land.	N/A	Not applicable. All mining at Brandspruit Colliery has stopped and the shafts have been closed since October 2018. Therefore, no clearing of land has been taking place since December 2018.
Operational Phase	Clearing of land during operational phase for construction of additional infrastructure, ventilation shafts that may have impact on operational phase	Dust / Respirable coal and silica dusts -> Environmental Aspect -> Air Quality (Dust)	Air quality	Dust generation	7.2.1.2.21 Prevent erosion of loose particles by vegetating cleared land / stockpiles as soon as possible.	N/A	Not applicable. All mining at Brandspruit Colliery has stopped and the shafts have been closed since October 2018. Therefore, no clearing of land has been taking place since December 2018.
Operational Phase	Clearing of land during operational phase for construction of additional infrastructure, ventilation shafts that may have impact on operational phase	Dust / Respirable coal and silica dusts -> Environmental Aspect -> Air Quality (Dust)	Air quality	Dust generation	7.2.1.2.22 Limit vehicle movement to designated roads wherever possible and limit vehicle speed.	N/A	Not applicable. All mining at Brandspruit Colliery has stopped and the shafts have been closed since October 2018. Therefore, no clearing of land has been taking place since December 2018.
Operational Phase	Clearing of land during operational phase for construction of additional infrastructure, ventilation shafts that may have impact on operational phase	Noise -> Environmental Aspect -> Noise	Noise	No anticipated impacts	7.2.1.2.23 No anticipated impacts	N/A	Not applicable. All mining at Brandspruit Colliery has stopped and the shafts have been closed since October 2018. Therefore, no clearing of land has been taking place since December 2018.
Operational Phase	Clearing of land during operational phase for construction of additional infrastructure, ventilation shafts that may have impact on operational phase	Social/ Cultural -> Environmental Aspect -> Sites of archaeological and cultural interest	Sites of archaeological and cultural interest	No anticipated impacts	7.2.1.2.24 No anticipated impacts	N/A	Not applicable. All mining at Brandspruit Colliery has stopped and the shafts have been closed since October 2018. Therefore, no clearing of land has been taking place since December 2018.
Operational Phase	Clearing of land during operational phase for construction of additional infrastructure, ventilation shafts that may have impact on operational phase	Biological -> Environmental Aspect -> Sensitive landscapes	Sensitive landscapes	No anticipated impacts	7.2.1.2.25 No anticipated impacts	N/A	Not Applicable All mining has stopped at Brandspruit Colliery and has been closed since October 2018 and therefore no clearing of land has been taking place since December 2018

EMP Phase	Authorisation Activity	Risk Source	Env Aspect	Potential Impact	Condition	Audit Compliance Status	*Comment*
Operational Phase	Clearing of land during operational phase for construction of additional infrastructure, ventilation shafts that may have impact on operational phase	Other -> Environmental Aspect -> Visual aspects	Visual aspects	Visual impact of dust	7.2.1.2.26 Suppress dust on cleared land.	N/A	Not applicable. All mining at Brandspruit Colliery has stopped and the shafts have been closed since October 2018. Therefore, no clearing of land has been taking place since December 2018.
Operational Phase	Clearing of land during operational phase for construction of additional infrastructure, ventilation shafts that may have impact on operational phase	Other -> Environmental Aspect -> Visual aspects	Visual aspects	Visual impact of dust	7.2.1.2.27 Limit vehicle movement to designated roads wherever possible and limit vehicle speed.	N/A	Not applicable. All mining at Brandspruit Colliery has stopped and the shafts have been closed since October 2018. Therefore, no clearing of land has been taking place since December 2018.
Operational Phase	Clearing of land during operational phase for construction of additional infrastructure, ventilation shafts that may have impact on operational phase	Other -> Environmental Aspect -> Visual aspects	Visual aspects	Visual impact of dust	7.2.1.2.28 Ensure stockpiles are vegetated to minimize dust generation.	N/A	Not applicable. All mining at Brandspruit Colliery has stopped and the shafts have been closed since October 2018. Therefore, no clearing of land has been taking place since December 2018.
Operational Phase	Clearing of land during operational phase for construction of additional infrastructure, ventilation shafts that may have impact on operational phase	Social/ Cultural -> Environmental Aspect -> Socio - economic structure	Socio-economic structure	No anticipated impacts	7.2.1.2.29 No anticipated impacts	N/A	Not applicable. All mining at Brandspruit Colliery has stopped and the shafts have been closed since October 2018. Therefore, no clearing of land has been taking place since December 2018.
Operational Phase	Clearing of land during operational phase for construction of additional infrastructure, ventilation shafts that may have impact on operational phase	Social/ Cultural -> Environmental Aspect -> Interested and Affected Parties (I&AP's)	Interested and Affected Parties (I&AP's)	Irritation caused by dust generation	7.2.1.2.30 Suppress dust on cleared land.	N/A	Not applicable. All mining at Brandspruit Colliery has stopped and the shafts have been closed since October 2018. Therefore, no clearing of land has been taking place since December 2018.
Operational Phase	Clearing of land during operational phase for construction of additional infrastructure, ventilation shafts that may have impact on operational phase	Social/ Cultural -> Environmental Aspect -> Interested and Affected Parties (I&AP's)	Interested and Affected Parties (I&AP's)	Irritation caused by dust generation	7.2.1.2.31 Limit vehicle movement to designated roads wherever possible and limit vehicle speed.	N/A	Not applicable. All mining at Brandspruit Colliery has stopped and the shafts have been closed since October 2018. Therefore, no clearing of land has been taking place since December 2018.

EMP Phase	Authorisation Activity	Risk Source	Env Aspect	Potential Impact	Condition	Audit Compliance Status	*Comment*
Operational Phase	Clearing of land during operational phase for construction of additional infrastructure, ventilation shafts that may have impact on operational phase	Social/ Cultural -> Environmental Aspect -> Interested and Affected Parties (I&AP's)	Interested and Affected Parties (I&AP's)	Irritation caused by dust generation	7.2.1.2.32 Ensure stockpiles are vegetated to minimize dust generation.	N/A	Not applicable. All mining at Brandspruit Colliery has stopped and the shafts have been closed since October 2018. Therefore, no clearing of land has been taking place since December 2018.
Operational Phase	Construction of additional infrastructure that will only occur during operational phase	Land -> Environmental Aspect -> Geology	Geology	No anticipated impacts	7.2.2.2.1 No anticipated impacts	N/A	Not applicable. All mining at Brandspruit Colliery has stopped and the shafts have been closed since October 2018. Therefore, no additional infrastructure has been constructed.
Operational Phase	Construction of additional infrastructure that will only occur during operational phase	Land -> Environmental Aspect -> Topography	Topography	No anticipated impacts	7.2.2.2.2 No anticipated impacts	N/A	Not applicable. All mining at Brandspruit Colliery has stopped and the shafts have been closed since October 2018. Therefore, no additional infrastructure has been constructed.
Operational Phase	Construction of additional infrastructure that will only occur during operational phase	Land -> Environmental Aspect -> Soils	Soil	No anticipated impacts	7.2.2.2.3 No anticipated impacts	N/A	Not applicable. All mining at Brandspruit Colliery has stopped and the shafts have been closed since October 2018. Therefore, no additional infrastructure has been constructed.
Operational Phase	Construction of additional infrastructure that will only occur during operational phase	Land -> Environmental Aspect -> Land use and land capability	Land capability	No anticipated impacts	7.2.2.2.4 No anticipated impacts	N/A	Not applicable. All mining at Brandspruit Colliery has stopped and the shafts have been closed since October 2018. Therefore, no additional infrastructure has been constructed.
Operational Phase	Construction of additional infrastructure that will only occur during operational phase	Land -> Environmental Aspect -> Land use and land capability	Land use	No anticipated impacts	7.2.2.2.5 No anticipated impacts	N/A	Not applicable. All mining at Brandspruit Colliery has stopped and the shafts have been closed since October 2018. Therefore, no additional infrastructure has been constructed.
Operational Phase	Construction of additional infrastructure that will only occur during operational phase	Biological -> Environmental Aspect -> Plant life / Vegetation	Vegetation	Minimisation of physiological processes	7.2.2.2.6 Suppress dust on cleared land.	N/A	Not applicable. All mining at Brandspruit Colliery has stopped and the shafts have been closed since October 2018. Therefore, no additional infrastructure has been constructed.
Operational Phase	Construction of additional infrastructure that will only occur during operational phase	Biological -> Environmental Aspect -> Animal life	Animal life	Increase in abundance of pests (mice, rats, etc.)	7.2.2.2.7 Dispose of domestic waste regularly as per waste management procedure.	N/A	Not applicable. All mining at Brandspruit Colliery has stopped and the shafts have been closed since October 2018. Therefore, no additional infrastructure has been constructed.

EMP Phase	Authorisation Activity	Risk Source	Env Aspect	Potential Impact	Condition	Audit Compliance Status	*Comment*
Operational Phase	Construction of additional infrastructure that will only occur during operational phase	Water -> Environmental Aspect -> Surface water	Surface water	No anticipated impacts	7.2.2.2.8 No anticipated impacts	N/A	Not applicable. All mining at Brandspruit Colliery has stopped and the shafts have been closed since October 2018. Therefore, no additional infrastructure has been constructed.
Operational Phase	Construction of additional infrastructure that will only occur during operational phase	Water -> Environmental Aspect -> Ground water	Ground water	No anticipated impacts	7.2.2.2.9 No anticipated impacts	N/A	Not applicable. All mining at Brandspruit Colliery has stopped and the shafts have been closed since October 2018. Therefore, no additional infrastructure has been constructed.
Operational Phase	Construction of additional infrastructure that will only occur during operational phase	Dust / Respirable coal and silica dusts -> Environmental Aspect -> Air Quality (Dust)	Air quality	No anticipated impacts	7.2.2.2.10 No anticipated impacts	N/A	Not applicable. All mining at Brandspruit Colliery has stopped and the shafts have been closed since October 2018. Therefore, no additional infrastructure has been constructed.
Operational Phase	Construction of additional infrastructure that will only occur during operational phase	Noise -> Environmental Aspect -> Noise	Noise	No anticipated impacts	7.2.2.2.11 No anticipated impacts	N/A	Not applicable. All mining at Brandspruit Colliery has stopped and the shafts have been closed since October 2018. Therefore, no additional infrastructure has been constructed.
Operational Phase	Construction of additional infrastructure that will only occur during operational phase	Social/ Cultural -> Environmental Aspect -> Sites of archaeological and cultural interest	Sites of archaeological and cultural interest	No anticipated impacts	7.2.2.2.12 No anticipated impacts	N/A	Not applicable. All mining at Brandspruit Colliery has stopped and the shafts have been closed since October 2018. Therefore, no additional infrastructure has been constructed.
Operational Phase	Construction of additional infrastructure that will only occur during operational phase	Biological -> Environmental Aspect -> Sensitive landscapes	Sensitive landscapes	No anticipated impacts	7.2.2.2.13 No anticipated impacts	N/A	Not applicable. All mining at Brandspruit Colliery has stopped and the shafts have been closed since October 2018. Therefore, no additional infrastructure has been constructed.
Operational Phase	Construction of additional infrastructure that will only occur during operational phase	Other -> Environmental Aspect -> Visual aspects	Visual aspects	Visual impact of lights	7.2.2.2.14 Plant trees to create a visual barrier.	N/A	Not applicable. All mining at Brandspruit Colliery has stopped and the shafts have been closed since October 2018. Therefore, no additional infrastructure has been constructed.
Operational Phase	Construction of additional infrastructure that will only occur during operational phase	Other -> Environmental Aspect -> Visual aspects	Visual aspects	Visual impact of lights	7.2.2.2.15 Ensure proper maintenance of infrastructure.	N/A	Not applicable. All mining at Brandspruit Colliery has stopped and the shafts have been closed since October 2018. Therefore, no additional infrastructure has been constructed.

EMP Phase	Authorisation Activity	Risk Source	Env Aspect	Potential Impact	Condition	Audit Compliance Status	*Comment*
Operational Phase	Construction of additional infrastructure that will only occur during operational phase	Other -> Environmental Aspect -> Visual aspects	Visual aspects	Visual impact of lights	7.2.2.2.16 Use directional lighting where possible.	N/A	Not applicable. All mining at Brandspruit Colliery has stopped and the shafts have been closed since October 2018. Therefore, no additional infrastructure has been constructed.
Operational Phase	Construction of additional infrastructure that will only occur during operational phase	Other -> Environmental Aspect -> Visual aspects	Visual aspects	Visual impact of lights	7.2.2.2.17 Turn of lights not required for the operation continuation of activities.	N/A	Not applicable. All mining at Brandspruit Colliery has stopped and the shafts have been closed since October 2018. Therefore, no additional infrastructure has been constructed.
Operational Phase	Construction of additional infrastructure that will only occur during operational phase	Social/ Cultural -> Environmental Aspect -> Socio - economic structure	Socio-economic structure	No anticipated impacts	7.2.2.2.18 No anticipated impacts	N/A	Not applicable. All mining at Brandspruit Colliery has stopped and the shafts have been closed since October 2018. Therefore, no additional infrastructure has been constructed.
Operational Phase	Construction of additional infrastructure that will only occur during operational phase	Social/ Cultural -> Environmental Aspect -> Interested and Affected Parties (I&AP's)	Interested and Affected Parties (I&AP's)	Increase in crime	7.2.2.2.19 Security measures should be implemented at the surface land use area.	N/A	Not applicable. All mining at Brandspruit Colliery has stopped and the shafts have been closed since October 2018. Therefore, no additional infrastructure has been constructed.
Operational Phase	Construction of additional infrastructure that will only occur during operational phase	Social/ Cultural -> Environmental Aspect -> Interested and Affected Parties (I&AP's)	Interested and Affected Parties (I&AP's)	Increase in crime	7.2.2.2.20 Restrict access to the surface land use area to authorized and on-duty personnel.	N/A	Not applicable. All mining at Brandspruit Colliery has stopped and the shafts have been closed since October 2018. Therefore, no additional infrastructure has been constructed.
Operational Phase	Construction of additional infrastructure that will only occur during operational phase	Social/ Cultural -> Environmental Aspect -> Interested and Affected Parties (I&AP's)	Interested and Affected Parties (I&AP's)	Increase in crime	7.2.2.2.21 Implement penalties and fines for poaching.	N/A	Not applicable. All mining at Brandspruit Colliery has stopped and the shafts have been closed since October 2018. Therefore, no additional infrastructure has been constructed.
Operational Phase	Underground Mining of Coal	Land -> Environmental Aspect -> Geology	Geology	geological strata will be altered by mining	7.2.3.2.1 (a Restrict the removal of rock to the mining area only.	C	Drawings provided by the EP showed that mining took place within the mining right area, therefore the removal of rock was restricted to the mining area.
Operational Phase	Underground Mining of Coal	Land -> Environmental Aspect -> Geology	Geology	geological strata will be altered by subsidence	7.2.3.2.1 (b No high extraction mining should take place underneath watercourses and sensitive landscapes.	NC	No information was provided to confirm that no high extraction took place under any watercourses or sensitive landscapes.

EMP Phase	Authorisation Activity	Risk Source	Env Aspect	Potential Impact	Condition	Audit Compliance Status	*Comment*
Operational Phase	Underground Mining of Coal	Land -> Environmental Aspect -> Geology	Geology	geological strata will be altered by subsidence	7.2.3.2.1 (c Plough and rip fractures at the surface.	C	The proof of rehabilitation of the areas where subsidence occurred provided by Brandspruit showed before and after rehabilitation photos. Although it is not clear whether the areas were ploughed and ripped, the photos showed that rehabilitation was successful. Thus it must be assumed that the soil was prepared to ensure the successful vegetation of the rehabilitated area.
Operational Phase	Underground Mining of Coal	Land -> Environmental Aspect -> Geology	Geology	geological strata will be altered by subsidence	7.2.3.2.1 (d Use rehabilitation techniques to ensure that subsided areas are free draining.	C	The documents provided for the rehabilitation of 18 subsided areas in Embalenhle Township showed that the areas were backfilled with engineer approved material and were made free draining.
Operational Phase	Underground Mining of Coal	Land -> Environmental Aspect -> Geology	Geology	geological strata will be altered by subsidence	7.2.3.2.1 (e Fertilize and vegetate damaged subsided areas to restore its pre-mining status if required.	C	The proof of rehabilitation of the areas where subsidence occurred provided by Brandspruit showed before and after rehabilition photos. Although it is not clear whether the areas were fertilised, the photos showed that rehabilitation was successful. Thus it must be assumed that the soil was prepared to ensure the successful vegetation of the rehabilitated area.
Operational Phase	Underground Mining of Coal	Land -> Environmental Aspect -> Topography	Topography	Mounds will be created	7.2.3.2.2 (a Ensure the height of the rock stockpile does not interrupt the line of the horizon.	N/A	Not applicable. All mining activities at Brandspruit Colliery has stopped and the mine has been closed since October 2018. No new rock stockpiles were constructed and no rock stockpiles were noticed onsite at the time of the audit.
Operational Phase	Underground Mining of Coal	Land -> Environmental Aspect -> Topography	Topography	Mounds will be created	7.2.3.2.2 (b Ensure that the gradient of stockpiles is 1:3 or less (shallower) so as to allow for the establishment of vegetation on all stockpiles.	N/A	Not applicable. All mining activities at Brandspruit Colliery has stopped and the mine has been closed since October 2018. No new rock stockpiles were constructed and no rock stockpiles were noticed onsite at the time of the audit.
Operational Phase	Underground Mining of Coal	Land -> Environmental Aspect -> Topography	Topography	Hollows will be created (subsidence)	7.2.3.2.2 (c Plough and rip fractures on the surface.	C	The proof of rehabilitation of the areas where subsidence occurred provided by Brandspruit showed before and after rehabilitation photos. Although it is not clear whether the areas were ploughed and ripped, the photos showed that rehabilitation was successful. Thus it must be assumed that the soil was prepared to ensure the successful vegetation of the rehabilitated area.
Operational Phase	Underground Mining of Coal	Land -> Environmental Aspect -> Topography	Topography	Hollows will be created (subsidence)	7.2.3.2.2 (d Use rehabilitation techniques to ensure that subsided areas are free draining.	C	The documents provided for the rehabilitation of 18 subsided areas in Embalenhle Township showed that the areas were backfilled with engineer approved material and were made free draining.

EMP Phase	Authorisation Activity	Risk Source	Env Aspect	Potential Impact	Condition	Audit Compliance Status	*Comment*
Operational Phase	Underground Mining of Coal	Land -> Environmental Aspect -> Topography	Topography	Hollows will be created (subsidence)	7.2.3.2.3 (e Fertilize and vegetate damaged subsided areas to restore its pre-mining status if required.	C	The proof of rehabilitation of the areas where subsidence occurred provided by Brandspruit showed before and after rehabilition photos. Although it is not clear whether the areas were fertilised, the photos showed that rehabilitation was successful. Thus it must be assumed that the soil was prepared to ensure the successful vegetation of the rehabilitated area.
Operational Phase	Underground Mining of Coal	Land -> Environmental Aspect -> Soils	Soil	Degradation of soil quality	7.2.3.2.3 (a The dirty water management area should be kept as small as possible.	NC	There is no clear separation of clean and dirty stormwater at the workshop area. At the time of the site visit, it was found that machinery requiring repairs were parked and stored in the clean area, thus increasing the dirty footprint. This resulted in the contamination of soil and runoff from this area, which is considered to be dirty and is not contained to the immediate site. Contaminated water areb however contained to a sump behind the wall. A service provider is then respsonsible to remove this water to an approved licenced facility. With the exception of dirty machinery containing coal and fine coal that are stored on site, good housekeeping practices are implemented on site. Brandspruit Main Shaft - The main shaft has been closed and is currently being used to store old defunct equipment from other operations. Due to the large number of machines that need to be stored machines are stored throughout the site. This increases the dirty water management area. No clear separation of clean and contaminated stormwater has been implemented. Thus the dirty water management area is not kept as small as possible.
Operational Phase	Underground Mining of Coal	Land -> Environmental Aspect -> Soils	Soil	Degradation of soil quality	7.2.3.2.3 (b No dirty water should be allowed to leave the dirty water management area (except during an exceptional flood event).	NC	Although the dirty water from the workshop area is not contained from dirty areas, various measures are in place to make sure that limited dirty water will leave the site. Steel plates have been placed in front of the stormwater outlets and Drizit booms are placed in front of the stormwater outlets. Water is also allowed to drain to a sump which is then cleaned by Interwaste. However, machinery were found to be stored in a clean area and this dirty water would not be contained. At Main Shaft, contaminated runoff from areas which are considered to be dirty areas are contained to the sump. This sump is then cleaned out by a service provider (Interwaste). However, machinery are stored in areas which are not linked to the dirty water systems.

EMP Phase	Authorisation Activity	Risk Source	Env Aspect	Potential Impact	Condition	Audit Compliance Status	*Comment*
Operational Phase	Underground Mining of Coal	Land -> Environmental Aspect -> Soils	Soil	Degradation of soil quality	7.2.3.2.3 (c Only clean or suitably treated water should be released into the environment (depending on the catchment objectives and license conditions).	NC	Stormwater is not treated prior to release. At the Main Shaft, the water is contained to a sump which is then removed by a service provider. At the Brandspruit workshop, runoff from clean areas are allowed to flow into the environment. However, at the time of the audit machinery requiring repairs were found to be stored in this clean area. The machine was leaking oil and this would result in the contamination of the clean water leaving the site.
Operational Phase	Underground Mining of Coal	Land -> Environmental Aspect -> Soils	Soil	Degradation of soil quality	7.2.3.2.3 (d Ensure that stockpiling of ROM coal is only undertaken within the designated and purposefully constructed area.	N/A	Not applicable. All mining activities at Brandspruit Colliery has stopped and the shafts have been closed since October 2018. No ROM coal stockpiling is taking place at the shafts.
Operational Phase	Underground Mining of Coal	Land -> Environmental Aspect -> Soils	Soil	Pollution of soils by spillage	7.2.3.2.3 (e Spillages should be cleaned up immediately.	C	Although signs of hydrocarbon spillages were noticed throughout the site, it was noticed that the necessary mitigation measures are in place to mitigate potential impacts. Spill kits are available and personnel are constantly cleaning up spillages found in the workshop areas.
Operational Phase	Underground Mining of Coal	Land -> Environmental Aspect -> Soils	Soil	Pollution of soils by spillage	7.2.3.2.3 (f Spillages should be neutralized if necessary (i.e. if too basic or too acidic).	N/A	Not applicable. Spillsorb is used when hydrocarbon spills occur.
Operational Phase	Underground Mining of Coal	Land -> Environmental Aspect -> Soils	Soil	Pollution of soils by spillage	7.2.3.2.3 (g Once the spillage has been cleaned up the soils should be tested and fertilized if necessary.	C	At the time of the audit, Brandspruit appointed a service provider to undertake a land contamination assessment. Approximately 10 samples were taken at areas where contamination is expected and recommendations will be made as to the rehabiliation required.
Operational Phase	Underground Mining of Coal	Land -> Environmental Aspect -> Soils	Soil	Pollution of soils by spillage	7.2.3.2.3 (h Natural vegetation should be established.	N/A	Not applicable. No natural vegetation will be established at the Brandspruit Main Shaft or the Workshop area, as these are still being used by service providers responsible for maintenance of equipment.
Operational Phase	Underground Mining of Coal	Land -> Environmental Aspect -> Soils	Soil	Degradation of soils caused by subsidence and / or fracturing	7.2.3.2.3 (i Plough and rip fractures at the surface.	C	The proof of rehabilitation of the areas where subsidence has occurred provided by Brandspruit showed before and after rehabilitation photos. Although it is not clear whether the areas were ploughed and ripped, the photos showed that rehabilitation was successful. Thus it must be assumed that the soil was prepared to ensure the successful vegetation of the rehabilitated area.
Operational Phase	Underground Mining of Coal	Land -> Environmental Aspect -> Soils	Soil	Degradation of soils caused by subsidence and / or fracturing	7.2.3.2.3 (j Use rehabilitation techniques to ensure that subsided areas are free draining.	C	The documents provided for the rehabilitation of 18 subsided areas in Embalenhle Township showed that the areas are backfilled with engineer approved material and were made free draining.

EMP Phase	Authorisation Activity	Risk Source	Env Aspect	Potential Impact	Condition	Audit Compliance Status	*Comment*
Operational Phase	Underground Mining of Coal	Land -> Environmental Aspect -> Soils	Soil	Degradation of soils caused by subsidence and / or fracturing	7.2.3.2.3 (k Fertilize and vegetate damaged subsided areas to restore its pre-mining status if required.	C	A presentation was provided that indicated that hydroseeding and erosion control mulches were tested for rehabilitation effectiveness. Proof of pictures before and after rehabilitation was provided and shows that the disturbed areas in Embalenhle Township were successfully fertilised and vegetated.
Operational Phase	Underground Mining of Coal	Land -> Environmental Aspect -> Land use and land capability	Land capability	Degradation of land capability	7.2.3.2.4 (a The dirty water management area should be kept as small as possible.	NC	There is no clear separation of clean and dirty stormwater at the workshop area. At the time of the site visit, it was found that machinery requiring repairs were parked and stored in the clean area, thus increasing the dirty footprint. This resulted in the contamination of soil and runoff from this area, which is considered to be dirty and is not contained. With the exception of dirty machinery containing coal and fine coal that are stored on site, good housekeeping practices are implemented on site. Brandspruit Main Shaft - The main shaft has been closed and is currently being used to store old defunct equipment from other operations. Due to the large number of machines that need to be stored machines are stored throughout the site. This increases the dirty water management area. No clear separation of clean and contaminated stormwater has been implemented. Thus the dirty water management area is not kept as small as possible.
Operational Phase	Underground Mining of Coal	Land -> Environmental Aspect -> Land use and land capability	Land capability	Degradation of land capability	7.2.3.2.4 (b No dirty water should be allowed to leave the dirty water management area (except during an exceptional flood event).	NC	Although the dirty water from the workshop area is not contained from dirty areas, various measures are in place to make sure that limited dirty water will leave the site. Steel plates have been placed in front of the stormwater outlets and Drizit booms are placed in front of the stormwater outlets. Water is also allowed to drain to a sump which is then cleaned by Interwaste. However, machinery were found to be stored in a clean area and this dirty water would not be contained. At Main Shaft, contaminated runoff from areas which are considered to be dirty areas are contained to the sump. This sump is then cleaned out by a service provider (Interwaste). However, machinery are stored in areas which are not linked to the dirty water systems.

EMP Phase	Authorisation Activity	Risk Source	Env Aspect	Potential Impact	Condition	Audit Compliance Status	*Comment*
Operational Phase	Underground Mining of Coal	Land -> Environmental Aspect -> Land use and land capability	Land capability	Degradation of land capability	7.2.3.2.4 (c Only clean or suitably treated water should be released into the environment (depending on the catchment objectives and license conditions).	NC	Stormwater is not treated prior to release. At the Main Shaft the water is contained to a sump which is then removed by a service provider. At the Brandspruit workshop runoff from clean areas are allowed to run into a sump on the outside of the wall. Interwaste then removes this water from the sump and dispose of it to an appropriate licence facility. However at the time of the audit machinery requiring repairs were found to be stored in this clean area. The machine was leaking oil and this would result in the contamination of the clean water leaving the site.
Operational Phase	Underground Mining of Coal	Land -> Environmental Aspect -> Land use and land capability	Land capability	Degradation of land capability	7.2.3.2.4 (d Limit the extent of surface disturbances.	N/A	All mining activities stopped at Brandspruit in 2018. No additional surface areas were disturbed at the time of the audit.
Operational Phase	Underground Mining of Coal	Land -> Environmental Aspect -> Land use and land capability	Land capability	Degradation of land capability as a result of subsidence and / or fracturing	7.2.3.2.4 (e Plough and rip fractures at the surface.	C	The proof of rehabilitation of the areas where subsidence has occurred provided by Brandspruit showed before and after rehabilitation photos. Although it is not clear whether the areas were ploughed and ripped, the photos showed that rehabilitation was successful. Thus it must be assumed that the soil was prepared to ensure the successful vegetation of the rehabilitated area.
Operational Phase	Underground Mining of Coal	Land -> Environmental Aspect -> Land use and land capability	Land capability	Degradation of land capability as a result of subsidence and / or fracturing	7.2.3.2.4 (f Use rehabilitation techniques to ensure that subsided areas are free draining.	C	The documents provided for the rehabilitation of 18 subsided areas in Embalenhle Township showed that the areas are backfilled with engineer approved material and were made free draining.
Operational Phase	Underground Mining of Coal	Land -> Environmental Aspect -> Land use and land capability	Land capability	Degradation of land capability as a result of subsidence and / or fracturing	7.2.3.2.4 (g Fertilize and vegetate damaged subsided areas to restore its pre-mining status if required.	C	A presentation was provided that indicated that hydroseeding and erosion control mulches were tested for rehabilitation effectiveness. Proof of pictures before and after rehabilitation was provided and shows that the disturbed areas in Embalenhle Township were successfully fertilised and vegetated.
Operational Phase	Underground Mining of Coal	Land -> Environmental Aspect -> Land use and land capability	Land use	Alteration of land use as a result of dewatering	7.2.3.2.5 (a Monitor the actual development of the cone of depression (monitor water levels in boreholes) and provide land owners with alternative water if required.	C	Groundwater Monitoring undertaken by GPT Consulting Environmental Scientists in 2021 provides the outcome of the groundwater monitoring of the Block 3 Mines. Groundwater levels are monitored six monthly. Brandspruit is currently providing water to a number of farmers as a result of the impact on their water quantity.
Operational Phase	Underground Mining of Coal	Land -> Environmental Aspect -> Land use and land capability	Land use	Degradation of land use as a result of subsidence and / or fracturing	7.2.3.2.5 (b Plough and rip fractures at the surface.	C	The proof of rehabilitation of the areas where subsidence has occurred provided by Brandspruit showed before and after rehabilitation photos. Although it is not clear whether the areas were ploughed and ripped, the photos showed that rehabilitation was successful. Thus it must be assumed that the soil was prepared to ensure the successful vegetation of the rehabilitated area.

EMP Phase	Authorisation Activity	Risk Source	Env Aspect	Potential Impact	Condition	Audit Compliance Status	*Comment*
Operational Phase	Underground Mining of Coal	Land -> Environmental Aspect -> Land use and land capability	Land use	Degradation of land use as a result of subsidence and / or fracturing	7.2.3.2.5 (c Use rehabilitation techniques to ensure that subsided areas are free draining.	C	The documents provided for the rehabilitation of 18 subsided areas in Embalenhle Township showed that the areas are backfilled with engineer approved material and were made free draining.
Operational Phase	Underground Mining of Coal	Land -> Environmental Aspect -> Land use and land capability	Land use	Degradation of land use as a result of subsidence and / or fracturing	7.2.3.2.5 (d Fertilize and vegetate damaged subsided areas to restore its pre-mining status if required.	C	A presentation was provided that indicated that hydroseeding and erosion control mulches were tested for rehabilitation effectiveness. Proof of pictures before and after rehabilitation was provided and shows that the disturbed areas in Embalenhle Township were successfully fertilised and vegetated.
Operational Phase	Underground Mining of Coal	Biological -> Environmental Aspect -> Plant life / Vegetation	Vegetation	Establishment of invader species	7.2.3.2.6 (a Check all surface land use areas for any invader plant species on a regular basis.	C	An alien invasive management plan was provided showing where alien invasive species have been identified. It is recommended that the status of the AIPs removed must be monitored against the management plan.
Operational Phase	Underground Mining of Coal	Biological -> Environmental Aspect -> Plant life / Vegetation	Vegetation	Establishment of invader species	7.2.3.2.6 (b Remove any invader plant species.	C	Alien invasive plants have been put onto a schedule to be removed. The Alien Invasive Management Plan showed what areas have beenclear and when the rest will be removed. The removal of all alien invasive species is scheduled to be completed by July 2022.
Operational Phase	Underground Mining of Coal	Biological -> Environmental Aspect -> Plant life / Vegetation	Vegetation	Degradation of vegetation as a result of subsidence and / or fracturing	7.2.3.2.6 (c Plough and rip fractures at the surface.	C	The proof of rehabilitation of the areas where subsidence has occurred provided by Brandspruit showed before and after rehabilitation photos. Although it is not clear whether the areas were ploughed and ripped, the photos showed that rehabilitation was successful. Thus it must be assumed that the soil was prepared to ensure the successful vegetation of the rehabilitated area.
Operational Phase	Underground Mining of Coal	Biological -> Environmental Aspect -> Plant life / Vegetation	Vegetation	Degradation of vegetation as a result of subsidence and / or fracturing	7.2.3.2.6 (d Use rehabilitation techniques to ensure that subsided areas are free draining.	C	The documents provided for the rehabilitation of 18 subsided areas in Embalenhle Township showed that the areas are backfilled with engineer approved material and were made free draining.
Operational Phase	Underground Mining of Coal	Biological -> Environmental Aspect -> Plant life / Vegetation	Vegetation	Degradation of vegetation as a result of subsidence and / or fracturing	7.2.3.2.6 (e Fertilize and vegetate damaged subsided areas to restore its pre-mining status if required.	C	A presentation was provided that indicated that hydroseeding and erosion control mulches were proved. Proof of pictures was provided that the disturbed areas in Embalenhle were successfully fertilised and vegetated.
Operational Phase	Underground Mining of Coal	Biological -> Environmental Aspect -> Plant life / Vegetation	Vegetation	Degradation of vegetation as a result of subsidence and / or fracturing	7.2.3.2.6 (f Remove any invader plant species as soon as they are identified.	C	Alien invasive plants have been put onto a schedule to be removed. No information is available on the status of the removal of the alien invasive plants on site.

EMP Phase	Authorisation Activity	Risk Source	Env Aspect	Potential Impact	Condition	Audit Compliance Status	*Comment*
Operational Phase	Underground Mining of Coal	Biological -> Environmental Aspect -> Animal life	Animal life	Frightening of fauna	7.2.3.2.7 (a Suppress dust on cleared land.	N/A	Not applicable. All mining activities at Brandspruit Colliery has stopped and the shafts have been closed since October 2018. No additional new infrastructure have been developed for the Audit period Jan 2021 - Dec 2021.
Operational Phase	Underground Mining of Coal	Biological -> Environmental Aspect -> Animal life	Animal life	Frightening of fauna	7.2.3.2.7 (b Where practically possible fencing should allow an opportunity for smaller animals to pass through the fence to escape the activities.	C	The existing fence allows an opportunity for smaller animals to pass through the fence.
Operational Phase	Underground Mining of Coal	Biological -> Environmental Aspect -> Animal life	Animal life	Frightening of fauna	7.2.3.2.7 (c Restrict vehicle movement to designated pathways.	C	All vehicle movement is restricted to designated roads at both the Main Shaft and the Workshop area. Both the No. 2 and 3E Shaft have been rehabilitated and no vehicle movement was noticed in this area. A gravel road provides access to a dwelling at No. 3E Shaft.
Operational Phase	Underground Mining of Coal	Biological -> Environmental Aspect -> Animal life	Animal life	Frightening of fauna	7.2.3.2.7 (d Restrict speed of vehicles at all times.	C	The speed of all vehicles are restricted at Brandspruit Main Shaft and at the Central Workshop.
Operational Phase	Underground Mining of Coal	Biological -> Environmental Aspect -> Animal life	Animal life	Impact on animals as a result of subsidence and / or fracturing	7.2.3.2.7 (e Plough and rip fractures at the surface.	C	The proof of rehabilitation of the areas where subsidence has occurred provided by Brandspruit showed before and after rehabilitation photos. Although it is not clear whether the areas were ploughed and ripped, the photos showed that rehabilitation was successful. Thus it must be assumed that the soil was prepared to ensure the successful vegetation of the rehabilitated area.
Operational Phase	Underground Mining of Coal	Biological -> Environmental Aspect -> Animal life	Animal life	Impact on animals as a result of subsidence and / or fracturing	7.2.3.2.7 (f Use rehabilitation techniques to ensure that subsided areas are free draining.	C	The documents provided for the rehabilitation of 18 subsided areas in Embalenhle Township showed that the areas are backfilled with engineer approved material and were made free draining.
Operational Phase	Underground Mining of Coal	Biological -> Environmental Aspect -> Animal life	Animal life	Impact on animals as a result of subsidence and / or fracturing	7.2.3.2.7 (g Fertilize and vegetate damaged subsided areas to restore its pre-mining status if required.	C	A presentation was provided that indicated that hydroseeding and erosion control mulches were tested for rehabilitation effectiveness. Proof of pictures before and after rehabilitation was provided and shows that the disturbed areas in Embalenhle Township were successfully fertilised and vegetated.

EMP Phase	Authorisation Activity	Risk Source	Env Aspect	Potential Impact	Condition	Audit Compliance Status	*Comment*
Operational Phase	Underground Mining of Coal	Water -> Environmental Aspect -> Surface water	Surface water	Decrease in surface water quality	7.2.3.2.8 (a The dirty water management area should be kept as small as possible.	NC	No clear separation of clean and dirty stormwater management was found at the workshop. At the time of the site visit, it was found that machinery requiring repairs were parked and stored in the clean area, thus increasing the dirty footprint. This resulted in the contamination of soil and runoff from this area, which are considered to be dirty and would not have been contained. With the exception of dirty machinery containing coal and fine coal stored on site, good housekeeping practices are implemented on site. The main shaft has been closed and is currently being used to store old defunct equipment from other operations. Due to the large number of machines that need to be stored, machines are stored throughout the site. This increases the dirty water management area. No clear separation of clean and contaminated stormwater has been implemented. Thus the dirty water management area is not kept as small as possible.
Operational Phase	Underground Mining of Coal	Water -> Environmental Aspect -> Surface water	Surface water	Decrease in surface water quality	7.2.3.2.8 (b No dirty water should be allowed to leave the dirty water management area (except during an exceptional flood event, as per the National Water Act, and only under license conditions).	NC	Although the dirty water from the workshop area is not contained from dirty areas, various measures are in place to make sure that limited dirty water will leave the site. Steel plates have been placed in front of the stormwater outlets and Drizit booms are placed in front of the stormwater outlets. Water is also allowed to drain to a sump which is then cleaned by Interwaste. However, machinery were found to be stored in a clean area and this dirty water would not be contained. At Main Shaft, contaminated runoff from areas which are considered to be dirty areas are contained to the sump. This sump is then cleaned out by a service provider (Interwaste). However, machinery are stored in areas which are not linked to the dirty water systems.
Operational Phase	Underground Mining of Coal	Water -> Environmental Aspect -> Surface water	Surface water	Decrease in surface water quality	7.2.3.2.8 (c Only clean or suitably treated water should be released into the environment.	NC	Stormwater is not treated prior to release. At the Main Shaft, the water is contained to a sump which is then removed by a service provider. At the Brandspruit workshop, runoff from clean areas are allowed to run into the environment. However, at the time of the audit machinery requiring repairs were found to be stored in this clean area. The machine was leaking oil and this would result in the contamination of the clean water leaving the site.

EMP Phase	Authorisation Activity	Risk Source	Env Aspect	Potential Impact	Condition	Audit Compliance Status	*Comment*
Operational Phase	Underground Mining of Coal	Water -> Environmental Aspect -> Surface water	Surface water	Degradation of vegetation as a result of subsidence and / or fracturing	7.2.3.2.8 (d Plough and rip fractures at the surface.	C	The proof of rehabilitation of the areas where subsidence has occurred provided by Brandspruit showed before and after rehabilitation photos. Although it is not clear whether the areas were ploughed and ripped, the photos showed that rehabilitation was successful. Thus it must be assumed that the soil was prepared to ensure the successful vegetation of the rehabilitated area.
Operational Phase	Underground Mining of Coal	Water -> Environmental Aspect -> Surface water	Surface water	Degradation of vegetation as a result of subsidence and / or fracturing	7.2.3.2.8 (e Use rehabilitation techniques to ensure that subsided areas are free draining.	C	The documents provided for the rehabilitation of 18 subsided areas in Embalenhle Township showed that the areas are backfilled with engineer approved material and were made free draining.
Operational Phase	Underground Mining of Coal	Water -> Environmental Aspect -> Surface water	Surface water	Degradation of vegetation as a result of subsidence and / or fracturing	7.2.3.2.8 (f Fertilize and vegetate damaged subsided areas to restore its pre-mining status if required.	C	A presentation was provided that indicated that hydroseeding and erosion control mulches were tested for rehabilitation effectiveness. Proof of pictures before and after rehabilitation was provided and shows that the disturbed areas in Embalenhle Township were successfully fertilised and vegetated.
Operational Phase	Underground Mining of Coal	Water -> Environmental Aspect -> Ground water	Ground water	Decrease in groundwater quantity as a result of the formation of a depression cone	7.2.3.2.9 (a Monitor the actual development of the cone of depression (monitor water levels in boreholes) and provide land owners with alternative water if required.	C	Groundwater Monitoring undertaken by GPT Consulting Environmental Scientists in 2021 provides the outcome of the groundwater monitoring of the Block 3 Mines. Groundwater levels are monitored six monthly at Brandspruit No. 2 Shaft. No monitoring is conducted or reported at the Main Shaft and no information is provided regarding the development of a cone of depression. Brandspruit is currently providing water to a number of farmers as a result of the impact on their water quantity.
Operational Phase	Underground Mining of Coal	Water -> Environmental Aspect -> Ground water	Ground water	Decrease in groundwater quality	7.2.3.2.9 (b The dirty water management area should be kept as small as possible.	NC	Although the dirty water from the workshop area is not contained from dirty areas, various measures are in place to make sure that limited dirty water will leave the site. Steel plates have been placed in front of the stormwater outlets and Drizit booms are placed in front of the stormwater outlets. Water is also allowed to drain to a sump which is then cleaned by Interwaste. However, machinery were found to be stored in a clean area and this dirty water would not be contained. At Main Shaft, contaminated runoff from areas which are considered to be dirty areas are contained to the sump. This sump is then cleaned out by a service provider (Interwaste). However, machinery are stored in areas which are not linked to the dirty water systems.

EMP Phase	Authorisation Activity	Risk Source	Env Aspect	Potential Impact	Condition	Audit Compliance Status	*Comment*
Operational Phase	Underground Mining of Coal	Water -> Environmental Aspect -> Ground water	Ground water	Decrease in groundwater quality	7.2.3.2.9 (c No dirty water should be allowed to leave the dirty water management area (except during an exceptional flood event, as per the National Water Act, and only under license conditions).	NC	
Operational Phase	Underground Mining of Coal	Water -> Environmental Aspect -> Ground water	Ground water	Decrease in groundwater quality	7.2.3.2.9 (d Only clean or suitably treated water should be released into the environment.	NC	Stormwater is not treated prior to release. At the Main Shaft, the water is contained to a sump which is then removed by a service provider. At the Brandspruit workshop, runoff from clean areas are allowed to run into a trench at the back of the workshop and this drains to a sump from where it is removed by a service provider. However, at the time of the audit machinery requiring repairs were found to be stored in this clean area. The machine was leaking oil and this would result in the contamination of the clean water leaving the site.
Operational Phase	Underground Mining of Coal	Water -> Environmental Aspect -> Ground water	Ground water	Decrease in groundwater quality	7.2.3.2.9 (e The pollution control dam should be lined so as to limit seepage.	N/A	Quarry Dam was previously the responsibility of Brandspruit, but its responsibility has been moved to SCS who is now responsible for its operation. The only facility currently still in operation is the Barber Dam at the coal bunker area. This dam is not dam but pan in the vicinity of the bunker and not lined. However this dam will be phased out and rehabilitated once the Brandspruit bunker and
Operational Phase	Underground Mining of Coal	Water -> Environmental Aspect -> Ground water	Ground water	Decrease in groundwater quality	7.2.3.2.9 (f Ensure that the ROM stockpiling is only conducted within the designated area, and that the ROM stockpile area is lined to limit infiltration.	N/A	Not applicable. All mining activities at Brandspruit Colliery has stopped and shafts have been closed since October 2018. No new rock stockpiles were constructed and no rock stockpiles were noticed on site.
Operational Phase	Underground Mining of Coal	Water -> Environmental Aspect -> Ground water	Ground water	Decrease in groundwater quality	7.2.3.2.9 (g Spillages should be timeously and effectively cleaned up so as to prevent infiltration of pollutants.	C	Although signs of hydrocarbon spillages were noticed throughout the site, it was noticed that the necessary mitigation measures are in place to mitigate the potential impacts. Spill kits are available and personnel are constantly cleaning up spillages found in the workshop areas.
Operational Phase	Underground Mining of Coal	Water -> Environmental Aspect -> Ground water	Ground water	Alteration of groundwater flow paths	7.2.3.2.9 (h Only remove rock required for the continuation of mining.	N/A	Not applicable. All mining activities at Brandspruit Colliery has stopped and shafts have been closed since October 2018. No rock has been removed since mining has ceased.

EMP Phase	Authorisation Activity	Risk Source	Env Aspect	Potential Impact	Condition	Audit Compliance Status	*Comment*
Operational Phase	Underground Mining of Coal	Water -> Environmental Aspect -> Ground water	Ground water	alteration of groundwater flow paths as a result of subsidence and / or fracturing	7.2.3.2.9 (i Plough and rip fractures at the surface.	C	The proof of rehabilitation of the areas where subsidence has occurred provided by Brandspruit showed before and after rehabilitation photos. Although it is not clear whether the areas were ploughed and ripped, the photos showed that rehabilitation was successful. Thus it must be assumed that the soil was prepared to ensure the successful vegetation of the rehabilitated area.
Operational Phase	Underground Mining of Coal	Water -> Environmental Aspect -> Ground water	Ground water	alteration of groundwater flow paths as a result of subsidence and / or fracturing	7.2.3.2.9 (j Use rehabilitation techniques to ensure that subsided areas are free draining and to reduce infiltration of clean water to underground.	C	The documents provided for the rehabilitation of 18 subsided areas in Embalenhle Township showed that the areas are backfilled with engineer approved material and were made free draining.
Operational Phase	Underground Mining of Coal	Dust / Respirable coal and silica dusts -> Environmental Aspect -> Air Quality (Dust)	Air quality	Decrease in air quality due to dust	7.2.3.2.10 (a Implement dust suppression systems underground.	N/A	Not applicable. All mining activities at Brandspruit Colliery has stopped and shafts have been closed since October 2018. No additional new infrastructure have been developed for the Audit period Jan 2021 - Dec 2021.
Operational Phase	Underground Mining of Coal	Dust / Respirable coal and silica dusts -> Environmental Aspect -> Air Quality (Dust)	Air quality	Decrease in air quality underground	7.2.3.2.10 (b Fit all vehicles that will operate underground with custom exhaust systems which filter exhaust fumes.	N/A	Not applicable. All mining activities at Brandspruit Colliery has stopped and shafts have been closed since October 2018.
Operational Phase	Underground Mining of Coal	Noise -> Environmental Aspect -> Noise	Noise	generation of noise	7.2.3.2.11 (a Only allow noise generation when necessary (i.e. switch off inactive machinery).	N/A	Not applicable. All mining activities at Brandspruit Colliery has stopped and shafts have been closed since October 2018.
Operational Phase	Underground Mining of Coal	Noise -> Environmental Aspect -> Noise	Noise	generation of noise	7.2.3.2.11 (b Ensure blasting in suitably controlled.	N/A	Not applicable. All mining activities at Brandspruit Colliery has stopped and shafts have been closed since October 2018.
Operational Phase	Underground Mining of Coal	Noise -> Environmental Aspect -> Noise	Noise	generation of noise	7.2.3.2.11 (c Ensure designs of ventilation shafts take the minimization of noise into consideration.	N/A	Not applicable. The mine has been closed in October 2018 and is entering the decommissioning phase. The ventilation shafts will be sealed and backfilled in the near future.
Operational Phase	Underground Mining of Coal	Noise -> Environmental Aspect -> Noise	Noise	generation of noise	7.2.3.2.11 (d Conduct noisy activities during the day time.	N/A	Not applicable. All mining activities at Brandspruit Colliery has stopped and shafts have been closed since October 2018. No activities are currently undertaken at the shaft areas.
Operational Phase	Underground Mining of Coal	Noise -> Environmental Aspect -> Noise	Noise	generation of noise	7.2.3.2.11 (e Only allow noise generation when necessary (i.e. switch off inactive machinery).	N/A	Not applicable. All mining activities at Brandspruit Colliery has stopped and shafts have been closed since October 2018. No activities are currently undertaken at the shaft areas.

EMP Phase	Authorisation Activity	Risk Source	Env Aspect	Potential Impact	Condition	Audit Compliance Status	*Comment*
Operational Phase	Underground Mining of Coal	Noise -> Environmental Aspect -> Noise	Noise	generation of noise	7.2.3.2.11 (f Provide protective gear for workers exposed to high noise levels.	N/A	Not applicable. All mining activities at Brandspruit Colliery has stopped and shafts have been closed since October 2018. No activities are currently undertaken at the shaft areas.
Operational Phase	Underground Mining of Coal	Social/ Cultural -> Environmental Aspect -> Sites of archaeological and cultural interest	Sites of archaeological and cultural interest	Degradation of sites of archaeological and cultural interest result of subsidence and / or fracturing	7.2.3.2.12 (a Avoid undermining of archaeological sites with high extraction mining.	NC	A number of heritage resources were identified within the Brandspruit Mining Right Area. However, no information was made available whether archaeological sites were undermined with high extraction mining.
Operational Phase	Underground Mining of Coal	Social/ Cultural -> Environmental Aspect -> Sites of archaeological and cultural interest	Sites of archaeological and cultural interest	Degradation of sites of archaeological and cultural interest result of subsidence and / or fracturing	7.2.3.2.12 (b Relocate graves prior to mining.	N/A	Not applicable. All mining activities at Brandspruit Colliery has stopped and shafts have been closed since October 2018. No graves are foreseen to be relocated.
Operational Phase	Underground Mining of Coal	Social/ Cultural -> Environmental Aspect -> Sites of archaeological and cultural interest	Sites of archaeological and cultural interest	Degradation of sites of archaeological and cultural interest result of subsidence and / or fracturing	7.2.3.2.12 (c Use rehabilitation techniques to ensure that subsided areas are free draining.	C	The documents provided for the rehabilitation of 18 subsided areas in Embalenhle Township showed that the areas are backfilled with engineer approved material and were made free draining.
Operational Phase	Underground Mining of Coal	Social/ Cultural -> Environmental Aspect -> Sites of archaeological and cultural interest	Sites of archaeological and cultural interest	Degradation of sites of archaeological and cultural interest result of subsidence and / or fracturing	7.2.3.2.12 (d Reconstruct graves if they have been damaged.	N/A	Not applicable. All mining activities at Brandspruit Colliery has stopped and shafts have been closed since October 2018. No graves were damaged in the past year.
Operational Phase	Underground Mining of Coal	Biological -> Environmental Aspect -> Sensitive landscapes	Sensitive landscapes	Degradation of sensitive landscapes as a result of subsidence and / or fracturing	7.2.3.2.13 (a Appoint a qualified specialist to design appropriate mitigation measures should this impact occur.	N/A	Not applicable. All mining activities at Brandspruit Colliery has stopped and shafts have been closed since October 2018. No activities are currently undertaken at the shaft areas that might need to be mitigated.
Operational Phase	Underground Mining of Coal	Biological -> Environmental Aspect -> Sensitive landscapes	Sensitive landscapes	Degradation of sensitive landscapes as a result of subsidence and / or fracturing	7.2.3.2.13 (b Plough and rip fractures at the surface.	C	The proof of rehabilitation of the areas where subsidence has occurred provided by Brandspruit showed before and after rehabilitation photos. Although it is not clear whether the areas were ploughed and ripped, the photos showed that rehabilitation was successful. Thus it must be assumed that the soil was prepared to ensure the successful vegetation of the rehabilitated area.
Operational Phase	Underground Mining of Coal	Biological -> Environmental Aspect -> Sensitive landscapes	Sensitive landscapes	Degradation of sensitive landscapes as a result of subsidence and / or fracturing	7.2.3.2.13 (c Use rehabilitation techniques to ensure that subsided areas are free draining.	C	The documents provided for the rehabilitation of 18 subsided areas in Embalenhle Township showed that the areas are backfilled with engineer approved material and were made free draining.

EMP Phase	Authorisation Activity	Risk Source	Env Aspect	Potential Impact	Condition	Audit Compliance Status	*Comment*
Operational Phase	Underground Mining of Coal	Biological -> Environmental Aspect -> Sensitive landscapes	Sensitive landscapes	Degradation of sensitive landscapes as a result of subsidence and / or fracturing	7.2.3.2.13 (d Fertilize and vegetate damaged subsided areas to restore its pre-mining status if required.	C	A presentation was provided that indicated that hydroseeding and erosion control mulches were tested for rehabilitation effectiveness. Proof of pictures before and after rehabilitation was provided and shows that the disturbed areas in Embalenhle Township were successfully fertilised and vegetated.
Operational Phase	Underground Mining of Coal	Biological -> Environmental Aspect -> Sensitive landscapes	Sensitive landscapes	Degradation of sensitive landscapes as a result of subsidence and / or fracturing	7.2.3.2.13 (e Remove any invader plant species as soon as they are identified.	C	Alien invasive plants have been put onto a schedule to be removed. The Alien Invasive Management Plan showed what areas have beenclear and when the rest will be removed. The removal of all alien invasive species is scheduled to be completed by July 2022.
Operational Phase	Underground Mining of Coal	Other -> Environmental Aspect -> Visual aspects	Visual aspects	No anticipated impacts	7.2.3.2.14 No anticipated impacts	N/A	Not applicable. All mining activities at Brandspruit Colliery has stopped and shafts have been closed since October 2018. No additional new infrastructure have been developed for the Audit period Jan 2021 - Dec 2021.
Operational Phase	Underground Mining of Coal	Social/ Cultural -> Environmental Aspect -> Socio - economic structure	Socio-economic structure	Retaining of current Brandspruit Staff	7.2.3.2.15 (a Employees can be further uplifted by being provided with opportunities to take part in courses to further their existing career at the proposed mine.	NC	No information was provided regarding the upliftment opportunities that is available to employees.
Operational Phase	Underground Mining of Coal	Social/ Cultural -> Environmental Aspect -> Socio - economic structure	Socio-economic structure	Retaining of current Brandspruit Staff	7.2.3.2.15 (b Sasol Mining can carry out community projects in order to aid the upliftment of the surrounding community.	C	Central Governance Department coordinate and manage the LED projects
Operational Phase	Underground Mining of Coal	Social/ Cultural -> Environmental Aspect -> Socio - economic structure	Socio-economic structure	Creation of additional jobs	7.2.3.2.15 (c The employment process should be fair and transparent.	C	Contractors are provided with the opportunity to tender for work to be undertaken. The rehabilitation of the subsided areas in Embalenhle Township was undertaken by a local contractor.
Operational Phase	Underground Mining of Coal	Social/ Cultural -> Environmental Aspect -> Socio - economic structure	Socio-economic structure	Creation of additional jobs	7.2.3.2.15 (d Employees for any additional jobs created should be sourced from the local area (Govern Mbeki Local Municipalities).	C	Mavutha Contractors were appointed to undertake the upgrade of the Sakhile Network.
Operational Phase	Underground Mining of Coal	Social/ Cultural -> Environmental Aspect -> Socio - economic structure	Socio-economic structure	Creation of additional jobs	7.2.3.2.15 (e Should any additional contract work become available, preference should be given to local contractors.	C	Mavutha Contractors were appointed to undertake the upgrade of the Sakhile Network.
Operational Phase	Underground Mining of Coal	Social/ Cultural -> Environmental Aspect -> Socio - economic structure	Socio-economic structure	Community projects	7.2.3.2.15 (f Monitor community projects to ensure that they are effective.	C	Central Governance Department coordinate and manage the LED projects.

EMP Phase	Authorisation Activity	Risk Source	Env Aspect	Potential Impact	Condition	Audit Compliance Status	*Comment*
Operational Phase	Underground Mining of Coal	Social/ Cultural -> Environmental Aspect -> Socio - economic structure	Socio-economic structure	Community projects	7.2.3.2.15 (g Modify community projects if necessary to increase effectiveness.	C	Central Governance Department coordinate and manage the LED projects.
Operational Phase	Underground Mining of Coal	Social/ Cultural -> Environmental Aspect -> Interested and Affected Parties (I&AP's)	Interested and Affected Parties (I&AP's)	Decrease in groundwater quantity as a result of the formation of a depression cone	7.2.3.2.16 (a Monitor the actual development of the cone of depression (monitor water levels in boreholes) and provide land owners with alternative water when it has been proven that the impact resulted from the mining activities associated with the proposed mine.	C	Groundwater Monitoring undertaken by GPT Consulting Environmental Scientists in 2021 provides the outcome of the groundwater monitoring of the Block 3 Mines. Groundwater levels are monitored six monthly at Brandspruit No. 2 Shaft. No monitoring is conducted or reported at the Main Shaft and no information is provided regarding the development of a cone of depression. Brandspruit is currently providing water to a number of farmers as a result of the impact on their water quantity.
Operational Phase	Underground Mining of Coal	Social/ Cultural -> Environmental Aspect -> Interested and Affected Parties (I&AP's)	Interested and Affected Parties (I&AP's)	Irritation of I&AP's by dust and noise	7.2.3.2.16 (b Suppress dust on cleared land.	N/A	Not applicable. All mining activities at Brandspruit Colliery has stopped and shafts have been closed since October 2018. No additional new infrastructure have been developed for the Audit period Jan 2021 - Dec 2021.
Operational Phase	Underground Mining of Coal	Social/ Cultural -> Environmental Aspect -> Interested and Affected Parties (I&AP's)	Interested and Affected Parties (I&AP's)	Irritation of I&AP's by dust and noise	7.2.3.2.16 (c Prevent erosion of loose particles by vegetation cleared land / stockpiles when possible.	N/A	Not Applicable All mining has stopped at Brandspruit Colliery and has been closed since October 2018. No topsoil stockpiles are available at Brandspruit.
Operational Phase	Underground Mining of Coal	Social/ Cultural -> Environmental Aspect -> Interested and Affected Parties (I&AP's)	Interested and Affected Parties (I&AP's)	Irritation of I&AP's by dust and noise	7.2.3.2.16 (d Limit vehicle movement to designated roads wherever possible.	C	Although all mining activities at Brandspruit has stopped and it has been closed since October 2018, the offices and central workshop are still being used. All vehicle movement is limited to existing roads at the Main Shaft and the Central workshops.
Operational Phase	Underground Mining of Coal	Social/ Cultural -> Environmental Aspect -> Interested and Affected Parties (I&AP's)	Interested and Affected Parties (I&AP's)	Irritation of I&AP's by dust and noise	7.2.3.2.16 (e Only allow noise generation when necessary (i.e. switch off inactive machinery).	N/A	Not applicable. All mining activities at Brandspruit Colliery has stopped and shafts have been closed since October 2018. No activities are currently undertaken at the shaft areas.
Operational Phase	Underground Mining of Coal	Social/ Cultural -> Environmental Aspect -> Interested and Affected Parties (I&AP's)	Interested and Affected Parties (I&AP's)	Irritation of I&AP's by dust and noise	7.2.3.2.16 (f Ensure blasting in suitably controlled.	N/A	Not applicable. All mining activities at Brandspruit Colliery has stopped and shafts have been closed since October 2018. No basting activities are currently undertaken.

EMP Phase	Authorisation Activity	Risk Source	Env Aspect	Potential Impact	Condition	Audit Compliance Status	*Comment*
Operational Phase	Underground Mining of Coal	Social/ Cultural -> Environmental Aspect -> Interested and Affected Parties (I&AP's)	Interested and Affected Parties (I&AP's)	Irritation of I&AP's by dust and noise	7.2.3.2.16 (g Conduct noisy activities during day time.	N/A	At the time of the audit, no activities were noticed resulting in noise. The mine is in closed and no mining activities are taking place which could result in nuisance noise.
Operational Phase	Underground Mining of Coal	Social/ Cultural -> Environmental Aspect -> Interested and Affected Parties (I&AP's)	Interested and Affected Parties (I&AP's)	Irritation of I&AP's by dust and noise	7.2.3.2.16 (h Only allow noise generation when necessary (i.e. switch off inactive machinery).	N/A	At the time of the audit, no activities were noticed resulting in noise. The mine is in closed and no mining activities are taking place which could result in nuisance noise.
Operational Phase	Underground Mining of Coal	Social/ Cultural -> Environmental Aspect -> Interested and Affected Parties (I&AP's)	Interested and Affected Parties (I&AP's)	Degradation of land as a result of subsidence and / or fracturing	7.2.3.2.16 (i Prevent impacts on I&AP's by excluding sensitive landscapes (such as wetlands) and infrastructure (such as farm houses) from areas to be mined by high extraction mining methods.	C	A report compiled by J&W on the potential impacts associated which high extraction mining was provided. Impacts associated with high extraction mining were identified.
Operational Phase	Underground Mining of Coal	Social/ Cultural -> Environmental Aspect -> Interested and Affected Parties (I&AP's)	Interested and Affected Parties (I&AP's)	Degradation of land as a result of subsidence and / or fracturing	7.2.3.2.16 (j Plough and rip fractures at the surface.	C	The proof of rehabilitation of the areas where subsidence has occurred provided by Brandspruit showed before and after rehabilitation photos. Although it is not clear whether the areas were ploughed and ripped, the photos showed that rehabilitation was successful. Thus it must be assumed that the soil was prepared to ensure the successful vegetation of the rehabilitated area.
Operational Phase	Underground Mining of Coal	Social/ Cultural -> Environmental Aspect -> Interested and Affected Parties (I&AP's)	Interested and Affected Parties (I&AP's)	Degradation of land as a result of subsidence and / or fracturing	7.2.3.2.16 (k Use rehabilitation techniques to ensure that subsided areas are free draining.	C	The documents provided for the rehabilitation of 18 subsided areas in Embalenhle Township showed that the areas are backfilled with engineer approved material and were made free draining.
Operational Phase	Underground Mining of Coal	Social/ Cultural -> Environmental Aspect -> Interested and Affected Parties (I&AP's)	Interested and Affected Parties (I&AP's)	Degradation of land as a result of subsidence and / or fracturing	7.2.3.2.16 (l Fertilize and vegetate damaged subsided areas to restore its pre-mining status if required.	C	A presentation was provided that indicated that hydroseeding and erosion control mulches were tested for rehabilitation effectiveness. Proof of pictures before and after rehabilitation was provided and shows that the disturbed areas in Embalenhle Township were successfully fertilised and vegetated.
Operational Phase	Underground Mining of Coal	Social/ Cultural -> Environmental Aspect -> Interested and Affected Parties (I&AP's)	Interested and Affected Parties (I&AP's)	Degradation of land as a result of subsidence and / or fracturing	7.2.3.2.16 (m Compensate landowners for any loss incurred as a direct result of subsidence and / or fracturing.	C	A process to compensate the landowners is managed by SMRD is in pace should a landowner bring any subsidence to the attention of the mine or SMRD.

EMP Phase	Authorisation Activity	Risk Source	Env Aspect	Potential Impact	Condition	Audit Compliance Status	*Comment*
Operational Phase	Mining Related Activities	Land -> Environmental Aspect -> Geology	Geology	No anticipated impacts	7.2.4.2.1 No anticipated impacts	N/A	Not applicable. All mining activities at Brandspruit Colliery has stopped and shafts have been closed since October 2018. No additional new infrastructure have been developed for the Audit period Jan 2021 - Dec 2021.
Operational Phase	Mining Related Activities	Land -> Environmental Aspect -> Topography	Topography	No anticipated impacts	7.2.4.2.2 No anticipated impacts	N/A	Not applicable. All mining activities at Brandspruit Colliery has stopped and shafts have been closed since October 2018. No additional new infrastructure have been developed for the Audit period Jan 2021 - Dec 2021.
Operational Phase	Mining Related Activities	Land -> Environmental Aspect -> Soils	Soil	Pollution of soils by spillage	7.2.4.2.3 (a Spillages should be cleaned up immediately.	C	Although signs of hydrocarbon spillages were noticed throughout the site, it was noticed that the necessary mitigation measures are in place to mitigate the potential impacts. Spill kits are available and personnel are constantly cleaning up spillages found in the workshop areas.
Operational Phase	Mining Related Activities	Land -> Environmental Aspect -> Soils	Soil	Pollution of soils by spillage	7.2.4.2.3 (b Spillages should be neutralized if necessary (i.e. if too basic or too acidic).	C	Although signs of hydrocarbon spillages were noticed throughout the site, it was noticed that the necessary mitigation measures are in place to mitigate the potential impacts. Spill kits are available and personnel are constantly cleaning up spillages found in the workshop areas.
Operational Phase	Mining Related Activities	Land -> Environmental Aspect -> Soils	Soil	Pollution of soils by spillage	7.2.4.2.3 (c Once the spillage has been cleaned up the soils should be tested and fertilized if necessary.	C	Although signs of hydrocarbon spillages were noticed throughout the site it was noticed that the necessary mitigation measures are in place to mitigate the potential impacts. Spill kits are available and personnel are constantly cleaning up spillages found in the workshop areas.
Operational Phase	Mining Related Activities	Land -> Environmental Aspect -> Soils	Soil	Pollution of soils by spillage	7.2.4.2.3 (d Natural vegetation should be established.	N/A	Once the Main Shaft is decommissioned and rehabilitated, natural vegetation will be established.
Operational Phase	Mining Related Activities	Land -> Environmental Aspect -> Soils	Soil	Loss of soil structure and function	7.2.4.2.3 (e Ensure stockpiles and berms remain vegetated to prevent erosion.	N/A	Not applicable. Mining at Brandspruit Colliery has stopped and shafts have been closed since October 2018. No stockpiles were noticed at the time of the audit.
Operational Phase	Mining Related Activities	Land -> Environmental Aspect -> Soils	Soil	Loss of soil structure and function	7.2.4.2.3 (f Remove alien invasive vegetation from the site.	C	Alien invasive plants have been put onto a schedule to be removed. The Alien Invasive Management Plan showed what areas have beenclear and when the rest will be removed. The removal of all alien invasive species is scheduled to be completed by July 2022.
Operational Phase	Mining Related Activities	Land -> Environmental Aspect -> Soils	Soil	Enrichment of soils in garden areas	7.2.4.2.3 (g Fertilize gardens when necessary	N/A	The buildings at the main shaft are still being used. Gardens are maintained by a service provider and will be fertilised if deemed necessary.

EMP Phase	Authorisation Activity	Risk Source	Env Aspect	Potential Impact	Condition	Audit Compliance Status	*Comment*
Operational Phase	Mining Related Activities	Land -> Environmental Aspect -> Soils	Soil	Enrichment of soils in garden areas	7.2.4.2.3 (h Maintain gardens appropriately	C	The gardens around the Main Shaft offices are maintained appropriately.
Operational Phase	Mining Related Activities	Land -> Environmental Aspect -> Land use and land capability	Land capability	No anticipated impacts	7.2.4.2.4 No anticipated impacts	N/A	Not applicable. All mining activities at Brandspruit Colliery has stopped and shafts have been closed since October 2018.
Operational Phase	Mining Related Activities	Land -> Environmental Aspect -> Land use and land capability	Land use	No anticipated impacts	7.2.4.2.5 No anticipated impacts	N/A	Not applicable. All mining activities at Brandspruit Colliery has stopped and shafts have been closed since October 2018.
Operational Phase	Mining Related Activities	Biological -> Environmental Aspect -> Plant life / Vegetation	Vegetation	Establishment of invader species	7.2.4.2.6 (a Remove any invader plant species as soon as they are identified.	C	Alien invasive plants have been put onto a schedule to be removed. The Alien Invasive Management Plan showed what areas have beenclear and when the rest will be removed. The removal of all alien invasive species is scheduled to be completed by July 2022.
Operational Phase	Mining Related Activities	Biological -> Environmental Aspect -> Plant life / Vegetation	Vegetation	Establishment of invader species	7.2.4.2.6 (b Ensure that only indigenous plants are planted in garden areas.	C	Although not all plants used for gardens at both the Main and the No. 2 Shaft areas were indigenous species, planting indigenous species is part of the Rehabilitation SOP.
Operational Phase	Mining Related Activities	Biological -> Environmental Aspect -> Plant life / Vegetation	Vegetation	Establishment of invader species	7.2.4.2.6 (c Ensure stockpiles are vegetated with flora indigenous to the area.	N/A	Not applicable. All mining activities at Brandspruit Colliery has stopped and shafts have been closed since October 2018.
Operational Phase	Mining Related Activities	Biological -> Environmental Aspect -> Plant life / Vegetation	Vegetation	minimisation of physiological processes	7.2.4.2.6 (d Suppress dust on cleared land.	N/A	Not applicable. All mining activities at Brandspruit Colliery has stopped and shafts have been closed since October 2018.
Operational Phase	Mining Related Activities	Biological -> Environmental Aspect -> Animal life	Animal life	Frightening of fauna	7.2.4.2.7 (a Suppress dust on cleared land.	N/A	Not applicable. All mining activities at Brandspruit Colliery has stopped and shafts have been closed since October 2018.
Operational Phase	Mining Related Activities	Biological -> Environmental Aspect -> Animal life	Animal life	Frightening of fauna	7.2.4.2.7 (b Any fencing should allow an opportunity for smaller animals to pass through the fence to escape the construction activities, but prevent re-entry.	C	The existing fence allows an opportunity for smaller animals to pass through the fence.
Operational Phase	Mining Related Activities	Biological -> Environmental Aspect -> Animal life	Animal life	Frightening of fauna	7.2.4.2.7 (c Restrict vehicle movement to designated pathways.	C	All vehicle movement is restricted to designated roads at both the Main Shaft and Workshop area. Both the No. 2 and 3E Shaft have been rehabilitated and no vehicle movement was noticed in this area. A gravel road provides access to a dwelling at No. 3E Shaft.

EMP Phase	Authorisation Activity	Risk Source	Env Aspect	Potential Impact	Condition	Audit Compliance Status	*Comment*
Operational Phase	Mining Related Activities	Biological -> Environmental Aspect -> Animal life	Animal life	Frightening of fauna	7.2.4.2.7 (d Restrict speed of vehicles at all times.	C	Speed limits are enforced throughout the Brandspruit Main Shaft area.
Operational Phase	Mining Related Activities	Biological -> Environmental Aspect -> Animal life	Animal life	Increase in abundance of pests (mice, rats, etc.)	7.2.4.2.7 (e Dispose of domestic waste regularly as per waste management procedure.	C	Waste management is done according to best practices and the waste management procedure.
Operational Phase	Mining Related Activities	Biological -> Environmental Aspect -> Animal life	Animal life	increase in faunal diversity	7.2.4.2.7 (f Monitor the surface land use area and note changes in faunal diversity.	N/A	Brandspruit is an existing mine and consists of disturbed areas, except for the areas that have been rehabilitated.
Operational Phase	Mining Related Activities	Biological -> Environmental Aspect -> Animal life	Animal life	Loss of life	7.2.4.2.7 (g Any fencing should allow an opportunity for smaller animals to pass through the fence to escape the construction activates, but prevent re-entry.	C	The existing fence allows an opportunity for smaller animals to pass through the fence.
Operational Phase	Mining Related Activities	Biological -> Environmental Aspect -> Animal life	Animal life	Loss of life	7.2.4.2.7 (h Restrict vehicle movement to designated pathways.	C	All vehicle movement is restricted to designated roads at both the Main Shaft and Workshop area. Both the No. 2 and 3E Shaft have been rehabilitated and no vehicle movement was noticed in this area. A gravel road provides access to a dwelling at No. 3E Shaft.
Operational Phase	Mining Related Activities	Biological -> Environmental Aspect -> Animal life	Animal life	Loss of life	7.2.4.2.7 (i Restrict speed of vehicles at all times.	N/A	Speed limits are enforced throughout the Brandspruit Main Shaft area.
Operational Phase	Mining Related Activities	Biological -> Environmental Aspect -> Animal life	Animal life	Loss of life	7.2.4.2.7 (j Ensure that all dirty water containment facilities are sufficiently fenced to prevent animals from entering the area.	C	The Brandspruit activities falls within the bigger Sasol Synfuels Plant area and also has there own security and fencing. No animals can just enter the PCD areas.
Operational Phase	Mining Related Activities	Biological -> Environmental Aspect -> Animal life	Animal life	Loss of life	7.2.4.2.7 (k Provide animal safe ladders on sloped areas into the pollution control dam to prevent accidental drowning.	N/A	Not applicable. The mine has been closed since October 2018 and is entering the decommissioning phase. No animal ladders were provided throughout the life of the mine.
Operational Phase	Mining Related Activities	Biological -> Environmental Aspect -> Animal life	Animal life	Loss of life	7.2.4.2.7 (l Restrict access to the surface land use area to authorized and on-duty personnel.	C	All vehicle movement is restricted to designated roads at both the Main Shaft and Workshop area. Both the No. 2 and 3E Shaft have been rehabilitated and no vehicle movement was noticed in this area. A gravel road provides access to a dwelling at No. 3E Shaft.
Operational Phase	Mining Related Activities	Biological -> Environmental Aspect -> Animal life	Animal life	Loss of life	7.2.4.2.7 (m Implement penalties and fines for poaching.	N/A	Not applicable. There are no wild animals on site which could be poached at Main Shaft and Central Workshop.

EMP Phase	Authorisation Activity	Risk Source	Env Aspect	Potential Impact	Condition	Audit Compliance Status	*Comment*
Operational Phase	Mining Related Activities	Water -> Environmental Aspect -> Surface water	Surface water	Decrease in surface water quality	7.2.4.2.8(a Monitor water levels in the pollution control dam to ensure that they comply with GN704.	N/A	Quarry Dam is now the responsibility of SCS and the PCDs at No. 2 Shaft have been rehabilitated.
Operational Phase	Mining Related Activities	Water -> Environmental Aspect -> Surface water	Surface water	Decrease in surface water quality	7.2.4.2.8(b Monitor the dam wall of the pollution control dam for nature of vegetation cover.	N/A	Quarry Dam is now the responsibility of SCS and the PCDs at No. 2 Shaft have been rehabilitated.
Operational Phase	Mining Related Activities	Water -> Environmental Aspect -> Surface water	Surface water	Decrease in surface water quality	7.2.4.2.8(c Remove shrubs and trees from the dam wall.	N/A	The PCDs at Brandspruit 2 Shaft have been removed. No other dams are in place on the site.
Operational Phase	Mining Related Activities	Water -> Environmental Aspect -> Surface water	Surface water	Decrease in surface water quality	7.2.4.2.8(d Ensure that the dam wall has grass cover to minimize erosion.	N/A	Quarry Dam is now the responsibility of SCS and the PCDs at No. 2 Shaft have been rehabilitated.
Operational Phase	Mining Related Activities	Water -> Environmental Aspect -> Surface water	Surface water	Decrease in surface water quality	7.2.4.2.8(e Berms and trenches must be monitored regularly to ensure they are not blocked.	C	At the time of the audit, the trenches behind Main Shaft was clean and sufficient capacity was available.
Operational Phase	Mining Related Activities	Water -> Environmental Aspect -> Surface water	Surface water	Decrease in surface water quality	7.2.4.2.8(f Pumps are regularly checked to ensure that they are functioning optimally.	N/A	Brandspruit is currently not pumping any process water from underground or to any other facilities. However, Brandspruit provides Impumelelo Mine with potable water.
Operational Phase	Mining Related Activities	Water -> Environmental Aspect -> Surface water	Surface water	Decrease in surface water quality	7.2.4.2.8(g Pipelines are regularly monitored for leaks, and leaks patched so as to prevent spillage of water.	C	Pipelines are regularly monitored and repaired when leaks are found. The EP takes pictures of the pipelines and inform the necessary responsible person if maintenance is needed.
Operational Phase	Mining Related Activities	Water -> Environmental Aspect -> Surface water	Surface water	Decrease in surface water quality	7.2.4.2.8(h Ensure waste is suitably disposed of in labelled bins.	C	Waste management is done according to best practices and the waste management procedure.
Operational Phase	Mining Related Activities	Water -> Environmental Aspect -> Surface water	Surface water	Increase in catchment yield	7.2.4.2.8(i Monitor water and only release water if the quality is good (as per license conditions).	N/A	Not applicable. No Sewage Treatment Plants are currently operational and therefore, no water/ effluent is released from Brandspruit.
Operational Phase	Mining Related Activities	Water -> Environmental Aspect -> Surface water	Surface water	Increase in catchment yield	7.2.4.2.8(j Ensure that all the relevant permissions are obtained for the release of water into the catchment.	N/A	Not applicable. No Sewage Treatment Plants are currently operational and therefore, no water/ effluent is released from Brandspruit.

EMP Phase	Authorisation Activity	Risk Source	Env Aspect	Potential Impact	Condition	Audit Compliance Status	*Comment*
Operational Phase	Mining Related Activities	Water -> Environmental Aspect -> Surface water	Surface water	Increase in catchment yield	7.2.4.2.8(k Maintain sewage treatment works to ensure that it operates optimally.	N/A	Not applicable. No Sewage Treatment Plants are currently operational and therefore, no water/ effluent is released from Brandspruit.
Operational Phase	Mining Related Activities	Water -> Environmental Aspect -> Ground water	Ground water	decrease in groundwater quality	7.2.4.2.9 (a Ensure that the water used for dust suppression is of an appropriate quality.	N/A	Not applicable. All mining activities at Brandspruit Colliery as stopped and shafts have been closed since October 2018. No additional new infrastructure have been developed for the Audit period Jan 2021 - Dec 2021.
Operational Phase	Mining Related Activities	Water -> Environmental Aspect -> Ground water	Ground water	decrease in groundwater quality	7.2.4.2.9 (b Ensure that waste is appropriately separated and disposed of in marked containers.	C	Waste management is done according to best practices and the waste management procedure.
Operational Phase	Mining Related Activities	Water -> Environmental Aspect -> Ground water	Ground water	increase in groundwater quantity	7.2.4.2.9 (c The amount of water used for dust suppression should be enough to keep dust suppressed but not enough to cause ponding or increased infiltration.	N/A	Not applicable. All mining activities at Brandspruit Colliery as stopped and shafts have been closed since October 2018. No additional new infrastructure have been developed for the Audit period Jan 2021 - Dec 2021.
Operational Phase	Mining Related Activities	Water -> Environmental Aspect -> Ground water	Ground water	increase in groundwater quantity	7.2.4.2.9 (d Pumps should be regularly checked to ensure that they are functioning optimally.	N/A	Brandspruit is currently not pumping any process water from underground or to any other facilities. However, Brandspruit provides Impumelelo Mine with potable water.
Operational Phase	Mining Related Activities	Water -> Environmental Aspect -> Ground water	Ground water	increase in groundwater quantity	7.2.4.2.9 (e Pipelines should be regularly monitored for leaks, and leaks patched so as to prevent spillage of water.	C	Pipeline are regularly monitored and repaired when leaks are found. The EP takes pictures of the pipelines and inform the necessary responsible person in maintenance is required.
Operational Phase	Mining Related Activities	Dust / Respirable coal and silica dusts -> Environmental Aspect -> Air Quality (Dust)	Air quality	Decrease in air quality as a result of additional vehicle movement	7.2.4.2.10 (a Maintain and service all machinery and vehicle on a regular basis as per the requirements of the specific machinery and vehicles.	N/A	Not applicable. All mining at Brandspruit Colliery has stopped and shafts have been closed since October 2018. Therefore, no machinery is used for mining at Brandspruit.
Operational Phase	Mining Related Activities	Dust / Respirable coal and silica dusts -> Environmental Aspect -> Air Quality (Dust)	Air quality	Decrease in air quality as a result of additional vehicle movement	.2.4.2.10 (b Switch off machinery and vehicles when not in use.	N/A	Not applicable. All mining at Brandspruit Colliery has stopped and shafts have been closed since October 2018. Therefore, no machinery is used for mining at Brandspruit.
Operational Phase	Mining Related Activities	Dust / Respirable coal and silica dusts -> Environmental Aspect -> Air Quality (Dust)	Air quality	dust generation	7.2.4.2.10 (c Suppress dust on cleared land.	N/A	Not applicable. All mining activities at Brandspruit Colliery as stopped and shafts have been closed since October 2018. No additional new infrastructure have been developed for the Audit period Jan 2021 - Dec 2021.

EMP Phase	Authorisation Activity	Risk Source	Env Aspect	Potential Impact	Condition	Audit Compliance Status	*Comment*
Operational Phase	Mining Related Activities	Dust / Respirable coal and silica dusts -> Environmental Aspect -> Air Quality (Dust)	Air quality	dust generation	7.2.4.2.10 (d Prevent erosion of loose particles by vegetating cleared land / stockpiles as soon as possible.	N/A	Not applicable. All mining at Brandspruit Colliery has stopped and shafts hava been closed since October 2018. No land has been cleared since.
Operational Phase	Mining Related Activities	Dust / Respirable coal and silica dusts -> Environmental Aspect -> Air Quality (Dust)	Air quality	dust generation	7.2.4.2.10 (e Limit vehicle movement to designated roads wherever possible. Limit vehicle speed.	N/A	All mining activities at Brandspruit has stopped and shafts have been closed since October 2018. No activities are undertaken that could result in dust generation.
Operational Phase	Mining Related Activities	Noise -> Environmental Aspect -> Noise	Noise	Noise generation	7.2.4.2.11 (a Conduct noisy activities during daytime.	N/A	All mining activities at Brandspruit has stopped and shafts have been closed since October 2018. No activities are undertaken that could result in nuisance noise.
Operational Phase	Mining Related Activities	Noise -> Environmental Aspect -> Noise	Noise	Noise generation	7.2.4.2.11 (b Provide workers with protective gear to mitigate the impact of noise.	N/A	All mining activities at Brandspruit has stopped and shafts have been closed since October 2018. No activities are undertaken at the shafts.
Operational Phase	Mining Related Activities	Social/ Cultural -> Environmental Aspect -> Sites of archaeological and cultural interest	Sites of archaeological and cultural interest	No anticipated impacts	7.2.4.2.12 N/A	N/A	Not applicable.
Operational Phase	Mining Related Activities	Biological -> Environmental Aspect -> Sensitive landscapes	Sensitive landscapes	alteration in structure and functioning of sensitive landscapes	7.2.4.2.13 (a Only discharge water that is clean.	N/A	No water is discharged from the Brandspruit operations.
Operational Phase	Mining Related Activities	Biological -> Environmental Aspect -> Sensitive landscapes	Sensitive landscapes	Alteration in structure and functioning of sensitive landscapes	7.2.4.2.13 (b Only discharge water according to Integrated Water Use License conditions.	N/A	No water is discharged from the Brandspruit operations.
Operational Phase	Mining Related Activities	Biological -> Environmental Aspect -> Sensitive landscapes	Sensitive landscapes	Alteration in structure and functioning of sensitive landscapes	7.2.4.2.13 (c If water is discharged not under license conditions, appoint a qualified specialist to determine and assist in implementing additional mitigation measures.	N/A	No water is discharged from the Brandspruit operations.
Operational Phase	Mining Related Activities	Social/ Cultural -> Environmental Aspect -> Sites of archaeological and cultural interest	Sites of archaeological and cultural interest	Alteration in structure and functioning of sensitive landscapes	N/A	N/A	Not applicable.

EMP Phase	Authorisation Activity	Risk Source	Env Aspect	Potential Impact	Condition	Audit Compliance Status	*Comment*
Operational Phase	Mining Related Activities	Other -> Environmental Aspect -> Visual aspects	Visual aspects	visual impact of dust	7.2.4.2.14 (a Pave or tar areas of movement.	C	All mining activities at Brandspruit has stopped and shafts have been closed since October 2018. Access roads and workshop areas are tarred and paved.
Operational Phase	Mining Related Activities	Other -> Environmental Aspect -> Visual aspects	Visual aspects	visual impact of dust	7.2.4.2.14 (b Limit vehicle movement to designated roads wherever possible.	N/A	All mining activities at Brandspruit has stopped and shafts have been closed since October 2018. No activities are undertaken that could result in visual impacts as a result of dust generation.
Operational Phase	Mining Related Activities	Other -> Environmental Aspect -> Visual aspects	Visual aspects	visual impact of dust	7.2.4.2.14 (c Ensure stockpiles are vegetated to minimize dust generation.	N/A	All mining activities at Brandspruit has stopped and shafts have been closed since October 2018. No stockpiles were noted at the time of the audit.
Operational Phase	Mining Related Activities	Other -> Environmental Aspect -> Visual aspects	Visual aspects	Visual impact of lights	7.2.4.2.14 (d Use directional lighting where possible.	N/A	No complaints have been received at Main Shaft regarding any lighting that is causing a nuisance.
Operational Phase	Mining Related Activities	Other -> Environmental Aspect -> Visual aspects	Visual aspects	Visual impact of lights	7.2.4.2.14 (e Turn off lights not required for the continuation of mining related activities.	C	All mining activities at Brandspruit has stopped and shafts have been closed since October 2018. Only offices at the Main Shaft is currently in use and lights are switched off at the end of the day.
Operational Phase	Mining Related Activities	Other -> Environmental Aspect -> Visual aspects	Visual aspects	Visual impact of lights	7.2.4.2.14 (f Draw blinds at night to limit the light emitted from inside buildings.	C	All mining activities at Brandspruit has stopped and shafts have been closed since October 2018. Only offices at the Main Shaft is currently in use and lights are switched off at the end of the day.
Operational Phase	Mining Related Activities	Social/ Cultural -> Environmental Aspect -> Socio - economic structure	Socio-economic structure	Community projects	7.2.4.2.15 (a Monitor community projects to ensure that they are effective.	C	Mavutha Contractors were appointed to undertake the upgrade of the Sakhile Network.
Operational Phase	Mining Related Activities	Social/ Cultural -> Environmental Aspect -> Socio - economic structure	Socio-economic structure	Community projects	7.2.4.2.15 (b Modify community projects if necessary to increase effectiveness.	C	Mavutha Contractors were appointed to undertake the upgrade of the Sakhile Network.
Operational Phase	Mining Related Activities	Social/ Cultural -> Environmental Aspect -> Socio - economic structure	Socio-economic structure	Community projects	7.2.4.2.15 (c Give preference to local contractors.	C	Services provided during the rehabilitation of the 18 subsidence sites in the Embalenhle Township and sourcing of aggregate was sourced from a local quarry. Mavutha contractors were appointed to undertake the upgrade of the Sakhile Network
Operational Phase	Mining Related Activities	Social/ Cultural -> Environmental Aspect -> Socio - economic structure	Socio-economic structure	Community projects	7.2.4.2.15 (d Encourage BEE participation in the tender process.	C	Mavutha Contractors were appointed to undertake the upgrade of the Sakhile Network.

EMP Phase	Authorisation Activity	Risk Source	Env Aspect	Potential Impact	Condition	Audit Compliance Status	*Comment*
Operational Phase	Mining Related Activities	Social/ Cultural -> Environmental Aspect -> Socio - economic structure	Socio-economic structure	Community projects	7.2.4.2.15 (e Ensure that the tender process is fair and well documented.	C	Information was provided that showed the Selatile Moloi Consulting Engineers was appointed on the upgrade of the Sakhile Network and that the Mavutha Contractors were appointed to undertake the work.
Operational Phase	Mining Related Activities	Social/ Cultural -> Environmental Aspect -> Interested and Affected Parties (I&AP's)	Interested and Affected Parties (I&AP's)	Nuisance dust and noise	7.2.4.2.16 (a Suppress dust on cleared land.	N/A	Not applicable. All mining activities at Brandspruit Colliery as stopped and shafts have been closed since October 2018. No additional new infrastructure have been developed for the Audit period Jan 2021 - Dec 2021.
Operational Phase	Mining Related Activities	Social/ Cultural -> Environmental Aspect -> Interested and Affected Parties (I&AP's)	Interested and Affected Parties (I&AP's)	Nuisance dust and noise	7.2.4.2.16 (b Limit vehicle movement to designated roads wherever possible.	N/A	Not applicable. All mining activities at Brandspruit Colliery as stopped and shafts have been closed since October 2018. No activities have been undertaken that could result in dust or noise generation.
Operational Phase	Mining Related Activities	Social/ Cultural -> Environmental Aspect -> Interested and Affected Parties (I&AP's)	Interested and Affected Parties (I&AP's)	Nuisance dust and noise	7.2.4.2.16 (c Ensure stockpiles are vegetated to minimize dust generation.	N/A	Not applicable. All mining activities at Brandspruit Colliery as stopped and shafts have been closed since October 2018. No activities have been undertaken that could result in dust or noise generation.
Operational Phase	Mining Related Activities	Social/ Cultural -> Environmental Aspect -> Interested and Affected Parties (I&AP's)	Interested and Affected Parties (I&AP's)	Nuisance dust and noise	7.2.4.2.16 (d Conduct noisy activities during the day time.	N/A	Not applicable. All mining activities at Brandspruit Colliery as stopped and shafts have been closed since October 2018. No activities have been undertaken that could result in dust or noise generation.
Operational Phase	Mining Related Activities	Social/ Cultural -> Environmental Aspect -> Interested and Affected Parties (I&AP's)	Interested and Affected Parties (I&AP's)	Nuisance dust and noise	7.2.4.2.16 (e Only allow noise generation when necessary (i.e. switch off inactive machinery).	N/A	Not applicable. All mining activities at Brandspruit Colliery as stopped and shafts have been closed since October 2018. No activities have been undertaken that could result in dust or noise generation.
Operational Phase	Mining Related Activities	Social/ Cultural -> Environmental Aspect -> Interested and Affected Parties (I&AP's)	Interested and Affected Parties (I&AP's)	Irritation of I&AP's as a result of visual disturbance	7.2.4.2.16 (f Use directional lighting where possible	N/A	No complaints have been received at Main Shaft regarding any lighting that is causing a nuisance.

EMP Phase	Authorisation Activity	Risk Source	Env Aspect	Potential Impact	Condition	Audit Compliance Status	*Comment*
Operational Phase	Mining Related Activities	Social/ Cultural -> Environmental Aspect -> Interested and Affected Parties (I&AP's)	Interested and Affected Parties (I&AP's)	Irritation of I&AP's as a result of visual disturbance	7.2.4.2.16 (g Turn off lights not required for the continuation of mining related activities	C	All mining activities at Brandspruit has stopped and shafts have been closed since October 2018. Only offices at the Main Shaft is currently in use and lights are switched off at the end of the day.
Operational Phase	Mining Related Activities	Social/ Cultural -> Environmental Aspect -> Interested and Affected Parties (I&AP's)	Interested and Affected Parties (I&AP's)	Irritation of I&AP's as a result of visual disturbance	7.2.4.2.16 (h Draw blinds at night to limit the light emitted from inside buildings	C	All mining activities at Brandspruit has stopped and shafts have been closed since October 2018. Only offices at the Main Shaft is currently in use and lights are switched off at the end of the day.
Operational Phase	Mining Related Activities	Social/ Cultural -> Environmental Aspect -> Interested and Affected Parties (I&AP's)	Interested and Affected Parties (I&AP's)	Irritation of I&AP's as a result of visual disturbance	7.2.4.2.16 (i Suppress dust on cleared land	N/A	Not applicable. All mining activities at Brandspruit Colliery as stopped and shafts have been closed since October 2018. No additional new infrastructure have been developed for the Audit period Jan 2021 - Dec 2021.
Operational Phase	Rehabilitation activities during operational phase (subsidence or any surface rehab)	Land -> Environmental Aspect -> Geology	Geology	No anticipated impacts	7.2.6.2.1 No anticipated impacts	N/A	Not applicable.
Operational Phase	Rehabilitation activities during operational phase (subsidence or any surface rehab)	Land -> Environmental Aspect -> Topography	Topography	Alteration of topography to close to its pre-mining status	7.2.6.2.2 Ensure that all rehabilitated surfaces are free-draining.	C	The 18 sites in Embalenhle Township where subsidence occurred was made free draining. The area at No. 3E shaft was also made free draining and the necessary contours were implemented to prevent erosion. No. 2 Shaft was also rehabilitated and the area appeared to be free drained after the surface dams were backfilled.
Operational Phase	Rehabilitation activities during operational phase (subsidence or any surface rehab)	Land -> Environmental Aspect -> Topography	Topography	Alteration of topography to close to its pre-mining status	7.2.6.2.3 Monitor rehabilitated areas to ensure that altered topography is stable.	NC	The EP visited the areas a number of times. The drainage of the one site was not sufficient and the EP requested that more work be undertaken to ensure that the area was made free draining and that the area was sufficiently vegetated. No information was made available that No. 2 Shaft was monitored.
Operational Phase	Rehabilitation activities during operational phase (subsidence or any surface rehab)	Land -> Environmental Aspect -> Soils	Soil	Compaction of soil	7.2.6.2.4 Limit vehicle movement to designated pathways.	N/A	No. 2 and 3E Shafts have already been rehabilitated at the time of the audit. No vehicle movement takes place at these areas. A gravel road at No. 3E shaft provides access to a dwelling situated on the property. This property has been sold to a third party.

EMP Phase	Authorisation Activity	Risk Source	Env Aspect	Potential Impact	Condition	Audit Compliance Status	*Comment*
Operational Phase	Rehabilitation activities during operational phase (subsidence or any surface rehab)	Land -> Environmental Aspect -> Soils	Soil	Rehabilitation of soil	7.2.6.2.5 Soils will be monitored, and if necessary corrected or maintained on a regular basis to ensure that the structure and function of the soil are becoming self sustaining.	N/A	Not applicable. No. 2 Shaft has been rehabilitated and therefore no additional soil analyses will be required.
Operational Phase	Rehabilitation activities during operational phase (subsidence or any surface rehab)	Land -> Environmental Aspect -> Soils	Soil	Soil erosion	7.2.6.2.6 Ensure barren areas are vegetated.	N/A	No barren areas were noticed at the time of the audit.
Operational Phase	Rehabilitation activities during operational phase (subsidence or any surface rehab)	Land -> Environmental Aspect -> Soils	Soil	Soil erosion	7.2.6.2.7 Limit vehicle movement on rehabilitated areas.	N/A	No. 2 and 3E Shafts have already been rehabilitated at the time of the audit. No vehicle movement takes place at these areas. No. 2 Shaft's access is controlled by the landowner who leases the property and therefore limited vehicles is allowed in this area. A gravel road at No. 3E shaft provides access to a dwelling situated on the property. This property has been sold to a third party.
Operational Phase	Rehabilitation activities during operational phase (subsidence or any surface rehab)	Land -> Environmental Aspect -> Soils	Soil	Pollution of soils by spillage	7.2.6.2.8 Spillages should be cleaned up immediately.	N/A	Not applicable. The No. 2 and 3E Shafts have been rehabilitated and a the time of the audit no signs were noticed of any hydrocarbon spillages.
Operational Phase	Rehabilitation activities during operational phase (subsidence or any surface rehab)	Land -> Environmental Aspect -> Soils	Soil	Pollution of soils by spillage	7.2.6.2.9 Spillages should be neutralized if necessary (i.e. if too basic or too acidic).	N/A	Not applicable. The No. 2 and 3E Shafts have been rehabilitated and a the time of the audit no signs were noticed of any hydrocarbon spillages.
Operational Phase	Rehabilitation activities during operational phase (subsidence or any surface rehab)	Land -> Environmental Aspect -> Soils	Soil	Pollution of soils by spillage	7.2.6.2.10 Once the spillage has been cleaned up the soils should be tested and fertilized if necessary.	N/A	Not applicable. The No. 2 and 3E Shafts have been rehabilitated and a the time of the audit no signs were noticed of any hydrocarbon spillages.
Operational Phase	Rehabilitation activities during operational phase (subsidence or any surface rehab)	Land -> Environmental Aspect -> Soils	Soil	Pollution of soils by spillage	7.2.6.2.11 Natural vegetation should be established.	NC	At the time of the audit it was noticed that although the No. 2 Shaft Area was rehabilitated, alien invasive species were the more dominant species occurring in the area. Natural vegetation has not been established at the time of the audit.
Operational Phase	Rehabilitation activities during operational phase (subsidence or any surface rehab)	Land -> Environmental Aspect -> Land use and land capability	Land capability	No anticipated impacts	7.2.6.2.12 No anticipated impacts	N/A	Not applicable.
Operational Phase	Rehabilitation activities during operational phase (subsidence or any surface rehab)	Land -> Environmental Aspect -> Land use and land capability	Land use	No anticipated impacts	7.2.6.2.13 No anticipated impacts	N/A	Not applicable.

EMP Phase	Authorisation Activity	Risk Source	Env Aspect	Potential Impact	Condition	Audit Compliance Status	*Comment*
Operational Phase	Rehabilitation activities during operational phase (subsidence or any surface rehab)	Biological -> Environmental Aspect -> Plant life / Vegetation	Vegetation	Establishment of invader species	7.2.6.2.14 Check all revegetated and surrounding areas for any invader plant species on a regular basis.	NC	No. 2 Shaft was rehabilitated, but no alien invasive monitoring programme was in place to ensure the successful vegetation of the area. At the time of the audit, no proof was available that regular monitoring for alien invasive species is being conducted.
Operational Phase	Rehabilitation activities during operational phase (subsidence or any surface rehab)	Biological -> Environmental Aspect -> Plant life / Vegetation	Vegetation	Establishment of invader species	7.2.6.2.15 Remove any invader plant species.	C	Alien invasive plants have been put onto a schedule to be removed. The Alien Invasive Management Plan showed what areas have beenclear and when the rest will be removed. The removal of all alien invasive species is scheduled to be completed by July 2022.
Operational Phase	Rehabilitation activities during operational phase (subsidence or any surface rehab)	Biological -> Environmental Aspect -> Animal life	Animal life	Frightening of fauna	7.2.6.2.16 Suppress dust on cleared land.	N/A	Not applicable. No areas were cleared that required dust suppression during the rehabilitation of No. 2 Shaft. No. 3 E Shaft has also been rehabilitated.
Operational Phase	Rehabilitation activities during operational phase (subsidence or any surface rehab)	Biological -> Environmental Aspect -> Animal life	Animal life	Frightening of fauna	7.2.6.2.17 Where practically possible fencing should allow an opportunity for smaller animals to pass through the fence to escape the rehabilitation activities.	C	The existing fence will allow an opportunity for smaller animals to pass through the fence. A large portion of the fence has been removed to incorporate it into the adjacent landowners property.
Operational Phase	Rehabilitation activities during operational phase (subsidence or any surface rehab)	Biological -> Environmental Aspect -> Animal life	Animal life	Frightening of fauna	7.2.6.2.18 Restrict vehicle movement to designated pathways.	N/A	Not applicable. At the time of the audit the rehabilitation of No. 2 and 3E shafts was completed. No vehicle movement was noticed. A gravel road provides access to a dwelling at No. 3E Shaft.
Operational Phase	Rehabilitation activities during operational phase (subsidence or any surface rehab)	Biological -> Environmental Aspect -> Animal life	Animal life	Frightening of fauna	7.2.6.2.19 Restrict speed of vehicles at all times.	N/A	Not applicable. At the time of the audit the rehabilitation of No. 2 and 3E shafts was completed. No vehicle movement was noticed. A gravel road provides access to a dwelling at No. 3E Shaft.
Operational Phase	Rehabilitation activities during operational phase (subsidence or any surface rehab)	Water -> Environmental Aspect -> Surface water	Surface water	Decrease in surface water quality	7.2.6.2.20 Suppress dust on cleared land.	N/A	Not applicable. No areas were cleared that required dust suppression during the rehabilitation of No. 2 Shaft. No. 3 E Shaft has also been rehabilitated.
Operational Phase	Rehabilitation activities during operational phase (subsidence or any surface rehab)	Water -> Environmental Aspect -> Surface water	Surface water	Decrease in surface water quality	7.2.6.2.21 Vegetate barren land with natural vegetation to prevent erosion.	N/A	No barren areas were noticed at the time of the audit.
Operational Phase	Rehabilitation activities during operational phase (subsidence or any surface rehab)	Water -> Environmental Aspect -> Surface water	Surface water	Decrease in surface water quality	7.2.6.2.22 Water quality will be sampled and monitored regularly.	C	Brandspruit forms part of the Block 3 Sasol Secunda Mines and these mines have a surface and groundwater monitoring programme in place.
Operational Phase	Rehabilitation activities during operational phase (subsidence or any surface rehab)	Water -> Environmental Aspect -> Surface water	Surface water	Increase in infiltration	7.2.6.2.23 Water quantity will be monitored regularly.	C	No water is being pumped from underground. Water that is provided to the farmers is monitored.

EMP Phase	Authorisation Activity	Risk Source	Env Aspect	Potential Impact	Condition	Audit Compliance Status	*Comment*
Operational Phase	Rehabilitation activities during operational phase (subsidence or any surface rehab)	Water -> Environmental Aspect -> Surface water	Surface water	Increase in infiltration	7.2.6.2.24 Backfill the incline shaft and seal other shafts to minimize surface water ingress.	C	Both the No. 2 Shaft and the No. 3E shafts have been backfilled.
Operational Phase	Rehabilitation activities during operational phase (subsidence or any surface rehab)	Water -> Environmental Aspect -> Surface water	Surface water	Pollution of surface water by spillage	7.2.6.2.25 Spillages should be cleaned up immediately.	N/A	Not applicable. The No. 2 and 3E Shafts have been rehabilitated and at the time of the audit, no signs were noticed of any hydrocarbon spillages.
Operational Phase	Rehabilitation activities during operational phase (subsidence or any surface rehab)	Water -> Environmental Aspect -> Ground water	Ground water	Pollution of groundwater by spillage	7.2.6.2.26 Spillages should be cleaned up immediately.	N/A	Not applicable. The No. 2 and 3E Shafts have been rehabilitated and at the time of the audit, no signs were noticed of any hydrocarbon spillages.
Operational Phase	Rehabilitation activities during operational phase (subsidence or any surface rehab)	Water -> Environmental Aspect -> Ground water	Ground water	Pollution of groundwater by spillage	7.2.6.2.27 Spillages should be neutralized if necessary (i.e. if too basic or too acidic).	N/A	Not applicable. The No. 2 and 3E Shafts have been rehabilitated and at the time of the audit, no signs were noticed of any hydrocarbon spillages.
Operational Phase	Rehabilitation activities during operational phase (subsidence or any surface rehab)	Dust / Respirable coal and silica dusts -> Environmental Aspect -> Air Quality (Dust)	Air quality	dust generation	7.2.6.2.28 Suppress dust on cleared land.	N/A	Not applicable. No areas were cleared that required dust suppression during the rehabilitation of No. 2 Shaft. No. 3 E Shaft has also been rehabilitated.
Operational Phase	Rehabilitation activities during operational phase (subsidence or any surface rehab)	Dust / Respirable coal and silica dusts -> Environmental Aspect -> Air Quality (Dust)	Air quality	dust generation	7.2.6.2.29 Prevent erosion of loose particles by vegetating barren land as soon as possible.	N/A	No barren areas were noticed at the time of the audit.
Operational Phase	Rehabilitation activities during operational phase (subsidence or any surface rehab)	Dust / Respirable coal and silica dusts -> Environmental Aspect -> Air Quality (Dust)	Air quality	dust generation	7.2.6.2.30 Limit vehicle movement to designated roads wherever possible.	N/A	Not applicable. Rehabilitation activities have been completed at No. 2 Shaft.
Operational Phase	Rehabilitation activities during operational phase (subsidence or any surface rehab)	Noise -> Environmental Aspect -> Noise	Noise	No anticipated impacts	7.2.6.2.31 No anticipated impacts	N/A	Not applicable. The rehabilitation of No. 2 and 3E shafts are completed and therefore, no additional impacts on noise are anticipated.
Operational Phase	Rehabilitation activities during operational phase (subsidence or any surface rehab)	Social/ Cultural -> Environmental Aspect -> Sites of archaeological and cultural interest	Sites of archaeological and cultural interest	No anticipated impacts	7.2.6.2.32 No anticipated impacts	N/A	Not applicable. The rehabilitation of No. 2 and 3E shaft are completed and therefore, no additional impacts on heritage are anticipated.

EMP Phase	Authorisation Activity	Risk Source	Env Aspect	Potential Impact	Condition	Audit Compliance Status	*Comment*
Operational Phase	Rehabilitation activities during operational phase (subsidence or any surface rehab)	Biological -> Environmental Aspect -> Sensitive landscapes	Sensitive landscapes	No anticipated impacts	7.2.6.2.33 No anticipated impacts	N/A	Not applicable.
Operational Phase	Rehabilitation activities during operational phase (subsidence or any surface rehab)	Other -> Environmental Aspect -> Visual aspects	Visual aspects	No anticipated impacts	7.2.6.2.34 No anticipated impacts	N/A	Not applicable.
Operational Phase	Rehabilitation activities during operational phase (subsidence or any surface rehab)	Social/ Cultural -> Environmental Aspect -> Socio - economic structure	Socio-economic structure	No anticipated impacts	7.2.6.2.35 No anticipated impacts	N/A	Not applicable. The rehabilitation of No. 2 and 3E shafts are completed and therefore, no additional impacts on any the socio-economic criteria are anticipated.
Operational Phase	Rehabilitation activities during operational phase (subsidence or any surface rehab)	Social/ Cultural -> Environmental Aspect -> Interested and Affected Parties (I&AP's)	Interested and Affected Parties (I&AP's)	No anticipated impacts	7.2.6.2.36 No anticipated impacts	N/A	Not applicable.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Land -> Environmental Aspect -> Geology	Geology	Alteration of geological strata as a result of clearing of land	7.2.6.3.1 (a Restrict the removal of rock to the disturbed surface area for rehabilitation only.	N/A	Not applicable. At the time of the audit, the rehabilitation of No. 2 and 3E shafts was completed. No additional rock was removed.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Land -> Environmental Aspect -> Geology	Geology	Alteration of geological strata as a result of backfilling of shafts	7.2.6.3.1 (b Ensure that no carbonaceous material is used to backfill shafts.	C	Both the No. 2 shaft and the Main Shaft have been backfilled recently. It was noticed that a lot of littering, plastic and plastic containers were lying within the shaft. It appears that this was backfilled into the shaft.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Land -> Environmental Aspect -> Topography	Topography	Alteration of topography to close to its pre-mining status	7.2.6.3.2 (a Ensure that all rehabilitated surfaces are free-draining.	C	The 18 sites in Embalenhle Township where subsidence occurred was made free draining. The area at No. 3E shaft was also made free draining and the necessary contours were implemented to prevent erosion. No. 2 Shaft was also rehabilitated and the area appeared to be free draining after the surface dams were backfilled.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Land -> Environmental Aspect -> Topography	Topography	Alteration of topography to close to its pre-mining status	7.2.6.3.2 (b Monitor rehabilitated areas to ensure that altered topography is stable.	C	Records that showed that the rehabilitated areas where subsidence occurred were monitored until the area was made free draining and the vegetation established.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Land -> Environmental Aspect -> Soils	Soil	Compaction of soil	7.2.6.3.3 (a Limit vehicle movement on stockpiles to prevent compaction of soils.	N/A	Not applicable. No. 2 Shaft has been rehabilitated.

EMP Phase	Authorisation Activity	Risk Source	Env Aspect	Potential Impact	Condition	Audit Compliance Status	*Comment*
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Land -> Environmental Aspect -> Soils	Soil	Compaction of soil	7.2.6.3.3 (b Limit vehicle movement to designated pathways.	N/A	Not applicable. No. 2 Shaft has been rehabilitated.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Land -> Environmental Aspect -> Soils	Soil	Rehabilitation of soil	7.2.6.3.3 (c Soils will be monitored, and if necessary corrected or maintained on a regular basis to ensure that the structure and function of the soil are becoming self sustaining.	N/A	Not applicable. No. 2 Shaft has been rehabilitated.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Land -> Environmental Aspect -> Soils	Soil	Soil erosion	7.2.6.3.3 (d Ensure barren areas are vegetated.	N/A	No barren areas were noticed at the time of the audit.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Land -> Environmental Aspect -> Soils	Soil	Soil erosion	7.2.6.3.3 (e Limit vehicle movement on rehabilitated areas.	N/A	Not applicable. No. 2 Shaft has been rehabilitated.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Land -> Environmental Aspect -> Soils	Soil	Pollution of soils by spillage	7.2.6.3.3 (f Spillages should be cleaned up immediately.	N/A	Not applicable. The No. 2 and 3E Shafts have been rehabilitated and at the time of the audit, no signs of any hydrocarbon spillages were noticed .
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Land -> Environmental Aspect -> Soils	Soil	Pollution of soils by spillage	7.2.6.3.3 (g Spillages should be neutralized if necessary (i.e. if too basic or too acidic).	N/A	Not applicable. The No. 2 and 3E Shafts have been rehabilitated and at the time of the audit, no signs were noticed of any hydrocarbon spillages.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Land -> Environmental Aspect -> Soils	Soil	Pollution of soils by spillage	7.2.6.3.3 (h Once the spillage has been cleaned up the soils should be tested and fertilized if necessary.	N/A	Not applicable. The No. 2 and 3E Shafts have been rehabilitated and at the time of the audit, no signs were noticed of any hydrocarbon spillages.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Land -> Environmental Aspect -> Soils	Soil	Pollution of soils by spillage	7.2.6.3.3 (i Natural vegetation should be established.	NC	At the time of the audit it was noticed that although the No. 2 Shaft Area was rehabilitated, alien invasive species were the more dominant species occurring in the area.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Land -> Environmental Aspect -> Soils	Soil		7.2.6.3.3 (j Rock (overburden) stockpiles will be used to backfill the incline shaft, and redundant infrastructure (mining operation specific infrastructure, mine related buildings, linear infrastructure, water related infrastructure, stockpiles, etc.) will be decommissioned and where possible removed.	C	The Main Shaft has been backfilled with old redundant infrastructure and sealed with course ash to manage any methane. The No. 2 Shaft has been backfilled with all redundant infrastructure. All infrastructure have been removed and the area was shaped and vegetated.

EMP Phase	Authorisation Activity	Risk Source	Env Aspect	Potential Impact	Condition	Audit Compliance Status	*Comment*
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Land -> Environmental Aspect -> Soils	Soil		7.2.6.3.3 (k Soils from the topsoil stockpiles will be used to rehabilitate cleared surface land use areas to close to their pre-mining status. Soil properties will be analysed and the soils fertilized (if required) prior to seeding with vegetation indigenous to the area.	C	No. 2 Shaft has been rehabilitated, all infrastructure removed and the area covered with topsoil and seeded.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Land -> Environmental Aspect -> Land use and land capability	Land capability		7.2.6.3.4 (a1 Redundant infrastructure will be removed and the surface land use areas (including the conveyor route) will be rehabilitated. Land capability will alter as rehabilitation takes place, and be returned to “agricultural”.	C	No. 3E Shaft has been rehabilitated and this land has now been sold to a third party. The area has been returned to agriculture. No. 2 Shaft has been rehabilitated to be incorporated and form part of the Rhino Lodge.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Land -> Environmental Aspect -> Land use and land capability	Land capability		7.2.6.3.4 (a2 The land capability will be altered to as close as possible to its pre-mining state.	C	Both the No. 2 and 3E shafts were rehabilitated in such a manner as to reflect the pre-mining state which represents agricultural.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Land -> Environmental Aspect -> Land use and land capability	Land capability	Change in land capability	7.2.6.3.4 (a Soils will be monitored, and if necessary corrected or maintained on a regular basis to ensure that the structure and function of the soil are becoming self sustaining.	N/A	Not applicabl. No. 2 Shaft has been rehabilitated and therefore, no additional soil analyses will be required.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Land -> Environmental Aspect -> Land use and land capability	Land capability	Change in land capability	7.2.6.3.4 (b Ensure that natural vegetation is re-established in rehabilitated areas.	NC	At the time of the audit, it was noticed that although the No. 2 Shaft Area was rehabilitated alien invasive species and weeds were noticed to be the more dominant species occurring in the area.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Land -> Environmental Aspect -> Land use and land capability	Land use		7.2.6.3.5 (a1 Redundant infrastructure in the surface land use area will be removed and the surface land use areas rehabilitated. The surface land use area will be rehabilitated based on the planned end land use.	C	No. 3E Shaft has been rehabilitated and this land has now been sold to a third party. The area have been returned to agriculture. No. 2 Shaft has been rehabilitated to be incorporated and form part of the Rhino Lodge.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Land -> Environmental Aspect -> Land use and land capability	Land use	change in land use	7.2.6.3.5 (a Ensure that land clearing and rehabilitation activities remain within designated areas and do not damage areas still considered natural.	C	Both the No. 2 and 3E shafts were rehabilitated in such a manner that only the footprint within the fenced areas were rehabilitated.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Land -> Environmental Aspect -> Land use and land capability	Land use	change in land use	7.2.6.3.5 (b Restrict access to areas where the pre-mining land use will have been permanently altered.	N/A	Not applicable. At the time of the audit, the rehabilitation of No. 2 and 3E shafts was completed. No. 2 Shaft was made available to the Rhino Lodge for use and the access to the area is controlled. However, the property where No. 3E Shaft is located has been sold and is not the responsibility of Brandspruit.

EMP Phase	Authorisation Activity	Risk Source	Env Aspect	Potential Impact	Condition	Audit Compliance Status	*Comment*
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Biological -> Environmental Aspect -> Plant life / Vegetation	Vegetation		7.2.6.3.6 (a1 Once all relevant surface land use areas have been decommissioned, rehabilitation will include the ripping of soil and placement of topsoil. Seed reflecting the surrounding natural vegetation or the vegetation of the indigenous to the local area should be sown in order to ensure that the resulting vegetation cover is representative of the study area.	NC	At the time of the audit it was noticed that although the No. 2 Shaft Area was rehabilitated alien invasive species and weeds were the more dominant species occurring in the area.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Biological -> Environmental Aspect -> Plant life / Vegetation	Vegetation		7.2.6.3.6 (a2 The rehabilitated and surrounding area should be carefully monitored to ensure that no invader plant species become established, as these species are often the pioneer plants in disturbed areas.	NC	The No. 2 Shaft has been rehabilitated and this included the seeding of the areas. However, alien invasive species and weeds were dominant in the area and need to be managed accordingly.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Biological -> Environmental Aspect -> Plant life / Vegetation	Vegetation	Increase in natural vegetation	7.2.6.3.6 (a Vegetation cover will be monitored on a regular basis to ensure that it has become established in the area.	NC	No proof was available at the time of the audit that the vegetation cover was monitored once the rehabilitation was completed at No. 2 Shaft.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Biological -> Environmental Aspect -> Plant life / Vegetation	Vegetation	Increase in natural vegetation	7.2.6.3.6 (b Alien invasive plant species must be removed to allow for natural vegetation to establish.	NC	No. 2 Shaft was rehabilitated, all infrastructure have been removed and the area vegetated. However, the vegetation establishment was not successful and is characterised by weeds and alien invasive plants. It is recommended that alien invasive species need to be removed and where necessary, the area be seeded with an indigenous seed mix applicable to the area. Alien invasive species were also noticed at No. 3E Shaft at the time of the audit. However, the property does not belong to Sasol Mining anymore.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Biological -> Environmental Aspect -> Plant life / Vegetation	Vegetation	Establishment of invader species	7.2.6.3.6 (c Check all revegetated and surrounding areas for any invader plant species on a regular basis.	C	An alien invasive management plan was provided showing where alien invasive species have been identified.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Biological -> Environmental Aspect -> Plant life / Vegetation	Vegetation	Establishment of invader species	7.2.6.3.6 (d Remove any invader plant species.	NC	No. 2 Shaft was rehabilitated, all infrastructure have been removed and the area vegetated. However, the vegetation establishment was not successful and is characterised by weeds and alien invasive plants. It is recommended that alien invasive species need to be removed and where necessary, the area be seeded with an indigenous seed mix applicable to the area. Alien invasive species were also noticed at No. 3E Shaft at the time of the audit. However, the property does not belong to Sasol Mining anymore.

EMP Phase	Authorisation Activity	Risk Source	Env Aspect	Potential Impact	Condition	Audit Compliance Status	*Comment*
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Biological -> Environmental Aspect -> Animal life	Animal life	Frightening of fauna	7.2.6.3.7 (a Suppress dust on cleared land.	N/A	Not applicable. No areas were cleared that required dust suppression during the rehabilitation of No. 2 Shaft. No. 3 E Shaft has also been rehabilitated.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Biological -> Environmental Aspect -> Animal life	Animal life	Frightening of fauna	7.2.6.3.7 (b Any fencing should allow an opportunity for smaller animals to pass through the fence to escape the rehabilitation activities, but prevent re-entry.	C	The existing fence will allow an opportunity for smaller animals to pass through the fence.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Biological -> Environmental Aspect -> Animal life	Animal life	Frightening of fauna	7.2.6.3.7 (c Restrict vehicle movement to designated pathways.	N/A	Not applicable . At the time of the audit, the rehabilitation of No. 2 and 3E shafts was completed. No vehicle movement was noticed. A gravel road provides access to a dwelling at No. 3E Shaft.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Biological -> Environmental Aspect -> Animal life	Animal life	Frightening of fauna	7.2.6.3.7 (d Restrict speed of vehicles at all times.	N/A	Not applicable . At the time of the audit, the rehabilitation of No. 2 and 3E shafts was completed. No vehicle movement was noticed. A gravel road provides access to a dwelling at No. 3E Shaft.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Biological -> Environmental Aspect -> Animal life	Animal life	Increase in carrying capacity	7.2.6.3.7 (e Vegetation cover will be monitored on a regular basis to ensure that it has become established in the area.	NC	No proof was available that the vegetation cover was monitored once the rehabilitation was completed at No. 2 Shaft.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Biological -> Environmental Aspect -> Animal life	Animal life	Increase in carrying capacity	7.2.6.3.7 (f Check all revegetated and surrounding areas for any invader plant species on a regular basis.	NC	No proof was available that the vegetation cover was monitored once the rehabilitation was completed at No. 2 Shaft.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Biological -> Environmental Aspect -> Animal life	Animal life	Increase in carrying capacity	7.2.6.3.7 (g Remove any invader plant species.	NC	No. 2 Shaft was rehabilitated, all infrastructure have been removed and the area vegetated. However, the vegetation establishment was not successful and is characterised by weeds and alien invasive plants. It is recommended that alien invasive species need to be removed and where necessary, the area be seeded with an indigenous seed mix applicable to the area. Alien invasive species were also noticed at No. 3E Shaft at the time of the audit. However, the property does not belong to Sasol Mining anymore.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Water -> Environmental Aspect -> Surface water	Surface water		7.2.6.3.8 (a1 Redundant infrastructure will be decommissioned and the ground rehabilitated.	C	No. 2 Shaft was decommissioned and all the infrastructure was removed and the area rehabilitated.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Water -> Environmental Aspect -> Surface water	Surface water		7.2.6.3.8 (a2 Topsoil will be placed and then vegetated.	C	No. 2 Shaft was decommissioned and all the infrastructure was removed and the area rehabilitated.

EMP Phase	Authorisation Activity	Risk Source	Env Aspect	Potential Impact	Condition	Audit Compliance Status	*Comment*
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Water -> Environmental Aspect -> Surface water	Surface water	Decrease in surface water quality	7.2.6.3.8 (a Suppress dust on cleared land.	N/A	Not applicable. No areas were cleared that required dust suppression during the rehabilitation of No. 2 Shaft. No. 3 E Shaft has also been rehabilitated.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Water -> Environmental Aspect -> Surface water	Surface water	Decrease in surface water quality	7.2.6.3.8 (b Vegetate barren land with natural vegetation to prevent erosion.	N/A	No barren areas were noticed at the time of the audit.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Water -> Environmental Aspect -> Surface water	Surface water	Decrease in surface water quality	7.2.6.3.8 (c Water quality will be sampled and monitored regularly.	C	Brandspruit forms part of the Block 3 Sasol Secunda Mines and these mines have a surface and groundwater monitoring programme in place.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Water -> Environmental Aspect -> Surface water	Surface water	Increase in infiltration	7.2.6.3.8 (d The dirty water management area should be kept as small as possible.	N/A	Not applicable. The No. 3E Shaft and the No. 2 Shaft were rehabilitated. All infrastructure have been removed which could require dirty water management.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Water -> Environmental Aspect -> Surface water	Surface water	Increase in infiltration	7.2.6.3.8 (e Backfill the incline shaft and seal other shafts to minimize surface water ingress.	C	Both the No. 2 and Brandspruit Main Shafts have been backfilled recently.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Water -> Environmental Aspect -> Surface water	Surface water	Pollution of surface water by spillage	7.2.6.3.8 (f Spillages should be cleaned up immediately.	N/A	Not applicable. The No. 2 and 3E Shafts have been rehabilitated and at the time of the audit, there were no signs of any hydrocarbon spillages.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Water -> Environmental Aspect -> Surface water	Surface water	Pollution of surface water by spillage	7.2.6.3.8 (g Spillages should be neutralized if necessary (i.e. if too basic or too acidic).	N/A	Not applicable. The No. 2 and 3E Shafts have been rehabilitated and at the time of the audit, there were no signs of any hydrocarbon spillages.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Water -> Environmental Aspect -> Ground water	Ground water		7.2.6.3.9 (a1 Pumping of groundwater will cease when mining operations at Brandspruit Mine are completed. This will mean that the cone of depression will dissipate.	N/A	Noted.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Water -> Environmental Aspect -> Ground water	Ground water		7.2.6.3.9 (a2 According to detailed studies of acid base accounting, potential of acid generation by the underlying rocks once exposed to oxidation are LOW. Instead, a neutralizing potential of rocks exist at higher levels.	N/A	Noted.

EMP Phase	Authorisation Activity	Risk Source	Env Aspect	Potential Impact	Condition	Audit Compliance Status	*Comment*
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Water -> Environmental Aspect -> Ground water	Ground water		7.2.6.3.9 (a3 With regards to decant, the depths at which mining is taking place at Brandspruit Mine accompanied by the massive overburden material will not allow for mine water to push to the surface.	C	The 2018 RSIP for Brandspruit stated the following : "With regards to decant, the depths at which mining is taking place at Brandspruit Mine accompanied by the massive overburden material will not allow for mine water to push to the surface."
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Water -> Environmental Aspect -> Ground water	Ground water		7.2.6.3.9 (a4 Instead the water tables (mine water table and the shallow aquifer water table) will draw close together and when these meet the normal springs that existed pre-mining will develop. Therefore, it is unlikely that mine water will daylight.	C	The 2018 RSIP for Brandspruit stated the following : "With regards to decant, the depths at which mining is taking place at Brandspruit Mine accompanied by the massive overburden material will not allow for mine water to push to the surface."
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Water -> Environmental Aspect -> Ground water	Ground water	Development of a pollution plume	7.2.6.3.9 (a Monitor the actual development of the pollution plume and provide land owners with alternative water if required	C	A pollution plume model is available for 2016 and 2021
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Water -> Environmental Aspect -> Ground water	Ground water	Groundwater decant	7.2.6.3.9 (b Monitor actual groundwater levels and potential position of decant.	C	The groundwater report compiled by GPT Consulting Environmental Scientists were provided. Groundwater level monitoring are undertaken at Brandspruit No. 2 Shaft.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Water -> Environmental Aspect -> Ground water	Ground water	Groundwater decant	7.2.6.3.9 (c Construct furrows and berms to direct water to a water management facility if required.	N/A	At the time of the audit it was not necessary to direct water to a water management facility.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Water -> Environmental Aspect -> Ground water	Ground water	Groundwater decant	7.2.6.3.9 (d Treat water / manage water to ensure that no polluted or acid water is released into the natural environment.	N/A	At the time of the audit, no treated water and/or effluent was discharged to the environment.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Water -> Environmental Aspect -> Ground water	Ground water	Pollution of groundwater by spillage	7.2.6.3.9 (e Spillages should be cleaned up immediately.	N/A	Not applicable. The No. 2 and 3E Shafts have been rehabilitated and at the time of the audit, there were no signs of any hydrocarbon spillages.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Water -> Environmental Aspect -> Ground water	Ground water	Pollution of groundwater by spillage	7.2.6.3.9 (f Spillages should be neutralized if necessary (i.e. if too basic or too acidic).	N/A	Not applicable. The No. 2 and 3E Shafts have been rehabilitated and at the time of the audit, there were no signs of any hydrocarbon spillages.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Dust / Respirable coal and silica dusts -> Environmental Aspect -> Air Quality (Dust)	Air quality	dust generation	7.2.6.3.10 (a Suppress dust on cleared land.	N/A	Not applicable. No areas were cleared that required dust suppression during the rehabilitation of No. 2 Shaft. No. 3 E Shaft has also been rehabilitated.

EMP Phase	Authorisation Activity	Risk Source	Env Aspect	Potential Impact	Condition	Audit Compliance Status	*Comment*
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Dust / Respirable coal and silica dusts -> Environmental Aspect -> Air Quality (Dust)	Air quality	dust generation	7.2.6.3.10 (b Prevent erosion of loose particles by vegetating barren land as soon as possible.	N/A	Not applicable. No areas were cleared that required dust suppression during the rehabilitation of No. 2 Shaft. No. 3 E Shaft has also been rehabilitated.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Dust / Respirable coal and silica dusts -> Environmental Aspect -> Air Quality (Dust)	Air quality	dust generation	7.2.6.3.10 (c Limit vehicle movement to designated roads wherever possible and also limit vehicle speed.	N/A	Not applicable. No. 2 Shaft has been rehabilitated therefore, no dust generation is taking place.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Dust / Respirable coal and silica dusts -> Environmental Aspect -> Air Quality (Dust)	Air quality	Decrease in exhaust generation	7.2.6.3.10 (d Maintain and service all machinery and vehicles on a regular basis as per the requirements of the specific machinery and vehicles.	N/A	Not applicable. All mining at Brandspruit Colliery has stopped and shafts have been closed since October 2018. Therefore, no machinery is maintained.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Dust / Respirable coal and silica dusts -> Environmental Aspect -> Air Quality (Dust)	Air quality	Decrease in exhaust generation	7.2.6.3.10 (e Switch off any machinery and vehicles when not in use.	N/A	Not applicable. Both the No. 2 and 3E Shafts have been rehabilitated and therefore, this could no be verified on site.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Noise -> Environmental Aspect -> Noise	Noise	Decrease in noise generation	7.2.6.3.11 (a Only allow noise generation when necessary.	N/A	Not applicable. Rehabilitation of the No. 2 and 3E shafts have been completed. No activities will take place which will result in the generation of noise.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Noise -> Environmental Aspect -> Noise	Noise	Decrease in noise generation	7.2.6.3.11 (b Conduct noisy activities during the day time.	N/A	Not applicable. All mining at Brandspruit Colliery has stopped and shafts have been closed since October 2018. No activities are taking place that could result in nuisance noise.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Noise -> Environmental Aspect -> Noise	Noise	Decrease in noise generation	7.2.6.3.11 (c Only allow noise generation when necessary.	N/A	Not applicable. All mining at Brandspruit Colliery has stopped and shafts have been closed since October 2018. No activities are taking place that could result in nuisance noise.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Social/ Cultural -> Environmental Aspect -> Sites of archaeological and cultural interest	Sites of archaeological and cultural interest	N/A	7.2.6.3.12 No anticipated impacts	N/A	Not applicable. All mining at Brandspruit Colliery has stopped and shafts have been closed since October 2018. No additional impacts to archaeological sites are anticipated.

EMP Phase	Authorisation Activity	Risk Source	Env Aspect	Potential Impact	Condition	Audit Compliance Status	*Comment*
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Biological -> Environmental Aspect -> Sensitive landscapes	Sensitive landscapes	Alteration of structure and functioning of sensitive landscapes	7.2.6.3.13 (a Disturb only the smallest possible surface area around infrastructure that is removed for rehabilitation.	C	During the rehabilitation of the No. 2 Shaft, the area within the footprint was rehabilitated. No additional areas were disturbed.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Biological -> Environmental Aspect -> Sensitive landscapes	Sensitive landscapes	Alteration of structure and functioning of sensitive landscapes	7.2.6.3.13 (b Rehabilitate sensitive landscapes to as close as possible to their pre-mining status.	C	Both the No 2. and 3E Shafts were rehabilitated back to agriculture. The property where the No. 3E Shaft was located was sold to a third party. The area is currently being used for the grazing of cattle.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Biological -> Environmental Aspect -> Sensitive landscapes	Sensitive landscapes	Alteration of structure and functioning of sensitive landscapes	7.2.6.3.13 (c Monitor rehabilitated sensitive landscapes and check for presence of alien invasive species.	NC	No. 2 Shaft was rehabilitated, all infrastructure have been removed and the area vegetated. However, the vegetation establishment was not successful and is characterised by alien invasive plants. It is recommended that alien invasive species need to be removed and where necessary, the area be seeded with an indigenous seed mix applicable to the area. Alien invasive species have been noticed at the time of the audit at No. 3E Shaft, however the property does not belong to Sasol Mining anymore.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Biological -> Environmental Aspect -> Sensitive landscapes	Sensitive landscapes	Alteration of structure and functioning of sensitive landscapes	7.2.6.3.13 (d Remove any alien invasive species found in rehabilitated areas.	NC	During the audit it was noted that alien invasive species were the dominant species found at No. 2 Shaft after the rehabilitation was completed.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Other -> Environmental Aspect -> Visual aspects	Visual aspects	Decrease in visual impact – removal of certain infrastructure	7.2.6.3.14 (a Vegetate unused cleared land available for rehabilitation as soon as possible.	N/A	At the time of the audit no unused, cleared areas were noticed.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Other -> Environmental Aspect -> Visual aspects	Visual aspects	Visual impact of dust	7.2.6.3.14 (b Suppress dust on cleared land.	N/A	Not applicable. No areas were cleared that required dust suppression during the rehabilitation of No. 2 Shaft. No. 3 E Shaft has also been rehabilitated.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Other -> Environmental Aspect -> Visual aspects	Visual aspects	Visual impact of dust	7.2.6.3.14 (c Limit vehicle movement to designated roads wherever possible.	N/A	Not applicable. No. 2 Shaft has been rehabilitated therefore no dust generation is taking place.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Social/ Cultural -> Environmental Aspect -> Socio - economic structure	Socio-economic structure	Loss of jobs	7.2.6.3.15 (a Employ miners at alternative sites.	C	Impumelelo Colliery was the replacement Mine for Brandspruit.

EMP Phase	Authorisation Activity	Risk Source	Env Aspect	Potential Impact	Condition	Audit Compliance Status	*Comment*
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Social/ Cultural -> Environmental Aspect -> Socio - economic structure	Socio-economic structure	Loss of jobs	7.2.6.3.15 (b Train employees in other skills to empower them to be able to work after the completion of mining.	C	The training schedule for 03-06 May 2022 was provided; however, this refers to the overhead crane training, basic firefighting training and driving safety. It must be emphasised that the employees from Brandspruit which were affected by the closure from Brandspruit were all accommodated at the Impumelelo Colliery which is the replacement mine for Brandspruit.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Social/ Cultural -> Environmental Aspect -> Interested and Affected Parties (I&AP's)	Interested and Affected Parties (I&AP's)	Decrease in dust and noise	7.2.6.3.16 (a Suppress dust on cleared land.	N/A	Not applicable. No areas were cleared that required dust suppression during the rehabilitation of No. 2 Shaft. No. 3 E Shaft has also been rehabilitated.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Social/ Cultural -> Environmental Aspect -> Interested and Affected Parties (I&AP's)	Interested and Affected Parties (I&AP's)	Decrease in dust and noise	7.2.6.3.16 (b Limit vehicle movement to designated roads.	N/A	Not applicable. No. 2 Shaft has been rehabilitated and therefore, no additional impacts are anticipated.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Social/ Cultural -> Environmental Aspect -> Interested and Affected Parties (I&AP's)	Interested and Affected Parties (I&AP's)	Decrease in dust and noise	7.2.6.3.16 (c Conduct noisy activities during the day time.	N/A	Not applicable. All mining activities at Brandspruit Colliery has stopped and shafts have been closed since October 2018. No activities are currently undertaken at the shaft areas that will result in nuisance noise.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Social/ Cultural -> Environmental Aspect -> Interested and Affected Parties (I&AP's)	Interested and Affected Parties (I&AP's)	Decrease in dust and noise	7.2.6.3.16 (d Only allow noise generation when necessary.	N/A	Not applicable. All mining activities at Brandspruit Colliery has stopped and shafts have been closed since October 2018. No activities are currently undertaken at the shaft areas that will result in nuisance noise.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Social/ Cultural -> Environmental Aspect -> Interested and Affected Parties (I&AP's)	Interested and Affected Parties (I&AP's)	change in sense of place	7.2.6.3.16 (e Regular discussions with landowners. Form a communication forum and hold regular meetings	C	SMRD is responsible for all liaising with the farmers. Regular meetings are held with the landowner.
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Social/ Cultural -> Environmental Aspect -> Interested and Affected Parties (I&AP's)	Interested and Affected Parties (I&AP's)	Decrease in groundwater quantity and quality	7.2.6.3.16 (f Monitor the actual groundwater quantity and quality and provide land owners with alternative water if required.	C	The groundwater report compiled by GPT Consulting Environmental Scientists were provided. Groundwater level monitoring is undertaken at Brandspruit No. 2 Shaft.

EMP Phase	Authorisation Activity	Risk Source	Env Aspect	Potential Impact	Condition	Audit Compliance Status	*Comment*
Decommissioning Phase	Rehabilitation Activities- This talks specifically to the rehabilitation of 3E Shaft	Social/ Cultural -> Environmental Aspect -> Interested and Affected Parties (I&AP's)	Interested and Affected Parties (I&AP's)	Decrease in groundwater quantity and quality	7.2.6.3.16 (g Treat water / manage water to ensure that no polluted or acid water is released into the natural environment.	N/A	At the time of the audit, no water was treated and/or effluent was discharged to the environment.