



NEMA EMPR AUDIT 2019

ELANDSFONTEIN COLLIERY

ELANDSFONTEIN COLLIERY (PTY) LTD

DECEMBER 2019

MP 30/5/1/2/2/10162 MR (314) MR AND

MP 30/5/1/2/3/2/1/1 (63) MR

NEMA EMPR AUDIT 2019

ELANDSFONTEIN COLLIERY

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EXECUTIVE SUMMARY

Geo Soil and Water cc (GSW) was appointed by Elandsfontein Colliery (Pty) Ltd to assess and report on compliance with the approved Environmental Management Programme (EMPr) associated with Mining Rights (MP 30/5/1/2/2/10162 MR (314) MR) and (MP 30/5/1/2/2/10162 MR (63) MR). This EMPr Performance Assessment (EMPr PAR) represents the Environmental Compliance Audit for 2019, in line with the requirements of the Minerals and Petroleum Resources Development Act 28 of 2002 (MPRDA) and the National Environmental Management Act 107 of 1998 (NEMA), for an independent compliance audit.

Scheduled Environmental Compliance Audits are required to be undertaken in terms of Regulation 34 of the NEMA Environmental Impact Assessment (EIA) Regulations, 2014. Regulation 34 states:

- 1) *“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.*
- 2) *The environmental audit report contemplated in sub-regulation (1) must-*
 - (a) *be prepared by an independent person with the relevant environmental auditing expertise;*
 - (b) *provide verifiable findings, in a structured and systematic manner, on*
 - i) *The level of performance against and compliance of an organisation or project with the provisions of the requisite environmental authorisation or EMPr and, where applicable, the closure plan; and*
 - ii) *The ability of the measures contained in the EMPr, and where applicable the closure plan, to sufficiently provide for the avoidance, management and mitigation of environmental impacts associated with the undertaking of the activity;*
 - (c) *Contain the information set out in [Appendix Z](#); and*
 - (d) *Be conducted and submitted to the competent authority at intervals as indicated in the environmental authorisation”.*

The **scope** of the audit is to assess compliance with the conditions of, and confirm the continued adequacy of, the EMPr. The **purpose** of the audit is to ensure compliance with the requirements of the EMPr and the NEMA EIA Regulation 34. The **objective** of the audit is to determine:

- The level of performance against, and compliance of the organisation or project with, the provisions of the EMPr; and
- The ability of the measures contained in the EMPr to sufficiently provide for the avoidance, management and mitigation of environmental impacts associated with the undertaking of the activity.

Initial documentation was obtained and reviewed in preparation for the audit. A checklist was prepared, based on the requirements of the EMPr for the construction, operational, decommissioning and closure phases (as applicable). Subsequent to the initial checklist preparation and documentation review, a site visit was undertaken on 18 November 2019.

Compliance with the requirements of the EMPr was evaluated using pre-determined scoring criteria as described in Section 4.2. The results of the evaluation are provided in Section 5.2 and the findings are described in Section 5.3. Each condition in the EMPr was weighted equally in order to determine a compliance score. Utilising this scoring system, a total compliance score of **64.13%** was obtained for this audit.

The key findings of the audit are provided in Table 1.

Table 1: Summary of findings of the audit.

Finding Ref. #	Finding and Recommendation
Stormwater Management	
1	<p>Evidence of erosion and ponding in proximity to the wetland/watercourse. Inadequate containment of dirty water from the dirty water areas.</p> <p>An updated Stormwater Management Plan was prepared during the compilation of this report.</p>
Waste Management	
2	<p>Inadequate waste management at the salvage yard - limited waste skips were available - a substantial amount of waste was not placed within waste skips and consequently, left lying on the ground.</p>
Spill Prevention	
3	<p>The fuel storage tanks were placed within a bunded area however; the bund had a drain without a valve that allowed the contaminated water to flow into the environment. Evidence of seepage through the walls of the bund indicated that the bund was not appropriately sealed to ensure impermeability. Additionally, the fuel storage area was not roofed as per the EMPr requirement.</p>
Mining Within Close Proximity of Sensitive Areas	
4	<p>Some of the sensitive areas that were recommended to be excluded from the mining plan were mined - these areas include mining within the 100m buffer of the wetland and mining within the sensitive <i>Hyparrhenia-Themeda</i> grassland. The DWS provided relaxation of the wetland buffer zones however, the conditions of the EMPr remains binding until the EMPr conditions have been amended.</p> <p>It is recommended that appropriate mitigation measures, in consultation with the specialists, are implemented to remedy the contraventions to the requirements of the EMPr going forward.</p>
Wetland Loss of Water Study	
5	<p>No evidence of a study to determine if the cone of depression would impact on the wetland areas.</p> <p>It is recommended that the study is undertaken as per the requirement of the EMPr.</p>

Local Employment and Procurement	
6	From the evidence provided, it could not be confirmed if procurement policies give preference to local labour or local service providers, if these policies are being implemented, if a local skills register was developed and if local procurement policies were shared with contractors.
Burial Grounds and Graves Consultation (BGGC) Process and Conservation Management Plan	
7	Burial Grounds and Graves Consultation (BGGC) Process was completed, however, no documentation was provided on request, including a CMP (Conservation Management Plan), as required by the Elandsfontein Colliery Burial Grounds and Graves Chance Finds Procedure, Digby Wells, dated January 2019.
Working Hours	
8	The mine is operating 24 hours, contrary to the requirements of the EMPr.
Alien Invasive Plant Management	
9	An Alien Invasive Plant Management Plan is available but not fully implemented. Removal of invader tree species has commenced.

Based on the audit, the EMPr is considered adequate and effective to manage and mitigate the current activities and impacts. Some of the conditions of the EMPr might be considered impractical to implement - these conditions should be amended, where possible, during the Section 102 EMPr amendment process that is currently being undertaken.

1 INTRODUCTION

Elandsfontein Colliery was started by Fraser Alexander in the 1980's and subsequently, sold to Elandsfontein Colliery (Pty) Ltd, a subsidiary of Anker Coal, in 1997. The Elandsfontein Colliery EMPr was approved in terms of the Minerals Act (Act 50 of 1991), in 1999.

Elandsfontein Colliery (Pty) Ltd obtained new order Mining Rights MR 314 MP and MR 63 MP) effective from 15 May 2013 - 14 May 2017 and 21 February 2008 – 20 February 2018, respectively. An amendment to the approved Environmental Management Plans (EMP) and renewal of Mining Rights MR 314 MP and MR 63 MP was applied for in 2016 and approved in 2019.

An EMPr for MR 63 MP was not available; as such the MR 314 MP EMPr formed the basis for the audit of the MR 63 MP areas.

A summary of the issued Mining Right and EMPr is presented in **Table 2**.

Table 2: Overview of the Mining Rights.

Asset	Farm	Portion	Holder	Mining Right Number	Renewal Application Number
Elandsfontein Colliery	Elandsfontein 309 JS	Remaining Extent of Portion 7 Portion of the Remaining Extent of Portion 8 Portion 44 Portion 14	Elandsfontein Colliery (Pty) Ltd	MP 314 MR	MP 10162 MR
	Elandsfontein 309 JS	Remaining Extent of Portion 1 Portion of the Remaining Extent of Portion 8 Portion of the Remaining Extent of Portion 6	Elandsfontein Colliery (Pty) Ltd	MP 63 MR	MP 10202 MR

Scheduled Environmental Compliance Audits are required to be undertaken in terms of Regulation 34 of the National Environmental Management Act, Act 107 of 1998 (NEMA) Environmental Impact Assessment (EIA) Regulations, 2014:

- 1) " 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.
- 2) The environmental audit report contemplated in sub-regulation (1) must-
 - (a) be prepared by an independent person with the relevant environmental auditing expertise;
 - (b) provide verifiable findings, in a structured and systematic manner, on
 - i) The level of performance against and compliance of an organisation or project with the provisions of the requisite environmental authorisation or EMPr and, where applicable, the closure plan; and

- ii) *The ability of the measures contained in the EMPr, and where applicable the closure plan, to sufficiently provide for the avoidance, management and mitigation of environmental impacts associated with the undertaking of the activity;*
- (c) *Contain the information set out in [Appendix Z](#); and*
- (d) *Be conducted and submitted to the competent authority at intervals as indicated in the environmental authorisation.”*

This EMPr Performance Assessment (EMPr PAR) represents the Environmental Compliance Audit for 2019, in line with the requirements of the Minerals and Petroleum Resources Development Act 28 of 2002 (MPRDA) and the National Environmental Management Act 107 of 1998 (NEMA), for an independent compliance audit.

1.1 DETAILS OF THE HOLDER

Details of the holder are summarised in Table 3 below.

Table 3: Details of the holder.

Company Name	Elandsfontein Colliery (Pty) Ltd.
Company Registration	1982/006208/07.
Physical Address	PO Box 33 Clewer 1036
Telephone Number	(013) 659 9900/01

1.2 BRIEF PROJECT DESCRIPTION

Elandsfontein Colliery is currently undertaking opencast mining in Pit 1 and Pit 3. Historic underground and opencast mining have occurred. Roll over strip mining method is utilised to extract the coal from the No. 1 and No. 2 Coal Seam and rehabilitation is undertaken concurrently as the coal is extracted. A dozer, truck and shovel are used to remove the topsoil and subsoil material. Hard overburden material is blasted to expose the No 2 Coal Seam which is mined and placed on the ROM stockpile for dry processing. Additionally, discard is sourced from the current discard facilities and discard coal that has been stored in old opencast workings. Elandsfontein Colliery has the required infrastructure in place for the safe and efficient production of raw ROM coal for the local power generation market. The following infrastructure is currently in place:

- Offices;
- Change Houses;
- Workshops;
- Coal washing plant;
- Filter press;
- Pollution Control Dams (PCDs); and
- Weighbridge.

2 DETAILS OF THE AUDITOR

The audit was undertaken by Francois Barnard on behalf of GSW. Francois' details are described in the section 2.1.

2.1 EXPERTISE OF THE AUDITOR

Francois is an environmental scientist offering environmental management, auditing, monitoring, training, rehabilitation and project management services. He is a registered Professional Natural Scientist who holds a BSc Honours degree in environmental sciences from the North-West University in Potchefstroom and is a trained environmental auditor (Aspects International, 2012). The auditing training included all aspects of environmental auditing as well as EMS auditing in terms of ISO14001. In addition, he is trained on the ISO14001:2015 environmental standard and has completed the EMS lead auditor training in terms of ISO14001:2015. He has over 11 years' experience in the environmental management and environmental and social auditing field on numerous projects and facilities in the energy, mining, infrastructure development and conservation management sectors. He is conversant with the South African environmental legislation as well as sustainability auditing, including Equator Principles, IFC Performance Standards and World Bank EHS guidelines. Francois has a thorough understanding of the environmental and social assessment and permitting processes and is experienced in the review, compilation and implementation of environmental and social management plans, procedures and method statements in line with best practice standards and systems, as well as document tracking and record keeping. A detailed CV can be provided on request.

2.2 DECLARATION OF INDEPENDENCE

I, Francois Barnard, declare that –

- *I act as the independent environmental auditor;*
- *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 Client;*
- *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 environmental Acts, regulations and any guidelines that have relevance to the audited operations;*
- *I will comply with the relevant Acts, regulations and all other applicable legislation;*
- *I have no, and will not engage in, conflicting interests in the audit process; and*
- *I realise that a false declaration is an offence in terms of regulation 48 and is punishable in terms of section 24F of the NEMA.*

I do not have and will not have any vested interest (either business, financial, personal or other) in the audit other than remuneration for work performed.

3 SCOPE, PURPOSE AND OBJECTIVE OF THE AUDIT

The **scope** of the audit is to assess compliance of the Elandsfontein Colliery operations, on both the MR 63 and MR 314 areas, with the conditions of- and confirm the continued adequacy of the EMPr (Ref.: MP 30/5/1/2/2/10162 MR (314) MR). The **purpose** of the audit is to ensure compliance with the requirement of the EMPr and the NEMA EIA Regulation 34 to undertake scheduled compliance audits. The **objectives** of the audit are to determine:

- The level of performance against and compliance of the organisation or project with the provisions of the requisite EMPr; and
- The ability of the measures contained in the EMPr, to sufficiently provide for the avoidance, management and mitigation of environmental impacts associated with the undertaking of the activity.

4 AUDIT METHODOLOGY

4.1 PROCEDURE FOR THE AUDIT

Initial documentation was obtained and reviewed in preparation for the audit. A checklist was prepared based on the requirements of the EMPr for the operational and closure phases. Following the initial checklist preparation and documentation review, a site visit was undertaken on 18 November 2019 to determine compliance with the EMPr. Compliance with the requirements of the EMPr was evaluated using the pre-determined scoring criteria as described in Section 4.2. The results of the evaluation are provided in Section 5.2 and the findings are described in Section 5.3 of this report.

The report provides recommendations for improvement based on general findings and site observations. The EMPr Performance Assessment is primarily a Compliance Audit against the conditions of the approved EMPr and the audit was conducted on the commitments of the approved EMPr only. Findings from the audit and site inspection that did not relate to an EMPr condition did not contribute to the audit score. However, where deficiencies have been identified that do not necessarily correspond to EMPr conditions, these findings have been used to provide recommendations for improvement.

Various documentation and records were required during the audit to confirm compliance with the EMPr conditions. Where possible, documentation and records were made available electronically for review prior to the site visit. The rest of the information required for verification of compliance was provided following the site inspection.

There is wide variety of South African environmental legislation and the mine is required to comply with all relevant legislation. Whilst consideration was given to the relevant environmental legislation, a full comprehensive legal compliance audit is beyond the scope of this audit. Where reference is made to legislation or other statutory provisions in this report, the original legislation or other statutory provisions will always take precedence and the reader is directed to revert to the original legislation or statutes.

4.2 EVALUATION CRITERIA USED DURING THE AUDIT

The evaluation criteria for compliance scoring were based on a pre-determined scoring system. Each condition in the EMPR was weighted equally in order to determine a compliance score. The scoring criteria used during the audit are as follows:

- Full-Compliance: Indicating that the condition was fully complied with and provided with a compliance score of 4.
- Partial-Compliance: Indicating that the condition has not been fully complied with and that additional measures are required to obtain full compliance. Partial compliances were provided with a compliance score of 2.
- Non-Compliance: Indicating that the condition has not been complied with and provided with a compliance score of 0.
- Not Applicable (N/A): Indicating that the condition is not currently applicable. Not applicable conditions were removed from the total number of conditions from which the compliance score was calculated.

4.3 CONSULTATION PROCESS UNDERTAKEN

The findings of this assessment are based on visual inspection of the relevant areas, interviews, as well as documentation reviewed. No physical testing or chemical analysis was performed during the assessment and information provided by employees was verified by inspection and review only.

5 RESULTS OF THE ASSESSMENT

The result of the audit have been described in **Table 4** and is based on the evaluation criteria described in section 4.2 of this report.

5.1 COMPLIANCE SUMMARY

A total of 147 commitments were identified in the EMPr that were evaluated. 55 of these conditions were considered not applicable to the operational phase of the mine. Of the applicable conditions, a total of 39 commitments were noted to be fully compliant, 40 partially compliant and 13 were non-compliant. The level of compliance for each commitment was calculated according to the methodology described in section 4. Utilising this scoring system, a total compliance score of **64.13%** was obtained for this audit. A summary of the percentage of conditions of the EMPr rated as Fully Compliant, Partially Compliant and Non-Compliant is presented in Figure 1.

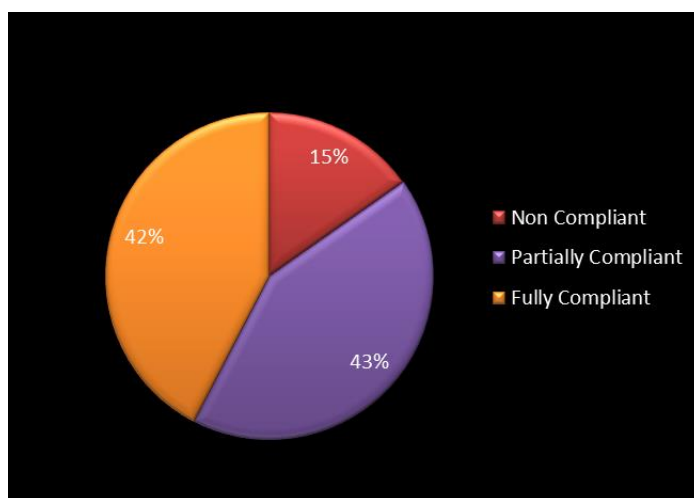


Figure 1: Distribution of compliance ratings for EMPr conditions.

The full compliance evaluation for the applicable conditions is presented in **Table 4** of section 5.2.

5.2 COMPLIANCE EVALUATION

A total of 147 commitments were assessed according to the assessment methodology as described in section 4. The compliance evaluation is presented in **Table 4**, Section 5.2 and the findings of the audit are presented in **Table 5**, Section 5.3.

Table 4: Compliance evaluation of EMPr commitments.

Reference	Mitigation Measures	Compliance Rating	Comments/ Verification
1	Soil, Land Use and Land Capability		
1.1	Follow adequate stripping guidelines in Section 12 of the soil assessment report (Appendix D);	4	Topsoil stripping appeared to be adequate.
1.2	Topsoil should be stripped by means of an excavator bucket and loaded onto dump trucks;	4	Stripping was undertaken by means of truck and shovel method.
1.3	If possible, topsoil should be stripped when soil is dry, as to reduce compaction;	4	Topsoil is stripped, as and when required. Mining does not occur during excessive rain.
1.4	Ensure topsoil is stored in one dedicated stockpile, 4 m high and away from drainages lines and surface water;	4	Topsoil is stored in one, dedicated stockpile at each mining area. The height of the topsoil stockpiles was not confirmed.
1.5	Only the designated access routes are to be used;	4	Designated access routes are used, as far as possible.
1.6	If erosion occurs, corrective actions must be taken to minimise any further erosion from taking place;	2	Erosion was noted along the access roads in the vicinity of the wetland/watercourse.
1.7	Stockpiles are to be maintained in a fertile and erosion free state by sampling and analysing annually for macro nutrients and soil pH, and vegetating the stockpiles to reduce erosion;	0	No annual soil stockpile sampling is done. Soil sampling is limited to haul roads, as per the Soil Contamination Assessment for the Elandsfontein Colliery Report, The Biodiversity Company, dated November 2019. No active vegetation establishment occurs.
1.8	Compaction of the removed topsoil should be avoided by prohibiting traffic on stockpiles;	4	Traffic on the topsoil stockpiles is limited, as far as possible.
1.9	Prevent unauthorised borrowing of stockpiled soil; and	4	No unauthorised borrowing of soil stockpiles.
1.10	Ensure proper storm water management designs are in place.	2	Inadequate stormwater management designs. Erosion and ponding in proximity of the wetland/watercourse.

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Reference	Mitigation Measures	Compliance Rating	Comments/ Verification
1.11	No land capability mitigation is possible during the operational phase because the land use is changed from agriculture to open pit mining. Therefore, the impact is expected to stay the same as discussed above.	N/A	The mine is in the operational phase.
1.12	Loosen soil in compacted areas to allow for natural vegetation regrowth;	N/A	The mine is in the operational phase.
1.13	Ensure proper storm water management designs are in place;	N/A	The mine is in the operational phase.
1.14	Replaced soils to be re-vegetated and designed according to Chamber of Mines Rehabilitation Guidelines, 2007;	N/A	The mine is in the operational phase.
1.15	Soils must be replaced according to the soil types;	N/A	The mine is in the operational phase.
1.16	Compaction of the topsoil should be avoided; and	N/A	The mine is in the operational phase.
1.17	A bowl scrapper is to be avoided as this piece of machinery compacts soil	N/A	The mine is in the operational phase.
1.18	Rehabilitate according to the rehabilitation plan;	N/A	The mine is in the operational phase.
1.19	Return the land conditions capable of supporting prior land use or uses equal or better than prior land use to the extent feasible or practical;	N/A	The mine is in the operational phase.
1.20	Contour slopes to minimise erosion and run-off;	N/A	The mine is in the operational phase.
1.21	The rehabilitated areas must be assessed once a year for compaction, erosion and fertility;	N/A	The mine is in the operational phase.
1.22	Compacted areas must be ripped to loosen the soil structure;	N/A	The mine is in the operational phase.
1.23	Only designated access routes should be used to reduce any unnecessary compaction; and	N/A	The mine is in the operational phase.
1.24	Corrective actions must be taken to minimise any further erosion from taking place.	N/A	The mine is in the operational phase.

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Reference	Mitigation Measures	Compliance Rating	Comments/ Verification
2	Heritage		
2.1	Planned open pit mining for Year 0 and the southern portion for Year 1 must be excluded from operational and decommissioning phases to conserve the burial ground BGG002 in situ, and reduce the intensity of the identified risks to BGG-001 and BGG-003;	4	One burial site was found to be conserved - not all burial sites were visited. Conservation of all burial sites should be confirmed with subsequent audits.
2.2	All identified burial grounds and graves must be subject to a Burial Grounds and Graves Consultation (BGGC) Process to identify bona fide NoK, reach agreement on the management and access to the sites, and formalise agreements in a CMP; and	2	Burial Grounds and Graves Consultation (BGGC) Process was completed, however, no documentation was provided on request, including a CMP (Conservation Management Plan), as required by the Elandsfontein Colliery Burial Grounds and Graves Chance Finds Procedure, Digby Wells, dated January 2019.
2.3	The assessor is aware that the location of the open pit is limited by the distribution of No.2 seam, and exclusion of portions of the planned open pit may not be economically viable. Where the proposed recommendations are not feasible, a Grave Relocation Process (GRP), supported by the aforementioned BGGC process must be completed. The GRP is regulated by Section 36 of the NHRA and Chapters XI and IX of the Regulations to the Act (GN R 548).	N/A	It was reported that grave relocation was not required.
2.4	Complete a BGGC process in accordance with Section 36 of the NHRA and Chapter IX of the Regulations to the Act to reach agreement with bona fide NoK on access and conservation of the burial grounds and graves. The agreements must be encapsulated within a CMP; The CMP must at a minimum: Identify and record all graves within the site-specific study area; Complete detailed mapping and numbering of all identified graves for management and record purposes; Assess current status and damage caused through previous operational activities; Establish a roles and responsibility matrix; Establish a monitoring process and schedule; Define conditions for project specific management and monitoring protocols; and Include a grievance mechanism to record any grievances received from NoK or other relevant parties.	2	Burial Grounds and Graves Consultation (BGGC) Process was completed, however, no documentation was provided on request, including a CMP (Conservation Management Plan), as required by the Elandsfontein Colliery Burial Grounds and Graves Chance Finds Procedure, Digby Wells, dated January 2019.

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Reference	Mitigation Measures	Compliance Rating	Comments/ Verification
3	Surface Water		
3.1	Clearing of vegetation must be limited to the development footprint area, existing access road must be utilised to access the various area;	4	Existing access roads are used, as far as possible.
3.2	Existing haul roads must be well compacted to avoid erosion of the soil into the streams;	2	Existing haul roads are well compacted to avoid erosion of the soil into the streams. Erosion was noted along the access roads in the vicinity of the wetland/watercourse.
3.3	All dirty water channels must be constructed and placed within the dirty water infrastructure areas, such that all dirty water runoff emanating from these areas are captured and contained to a dirty water containment facility;	2	Inadequate containment of dirty water from the dirty water areas.
3.4	Dust suppression on the haul roads and cleared areas must be regularly undertaken to limit mobilization of sediments or hazardous substances that may have leaked from construction vehicles/machineries during construction; and	4	Dust suppression with water is undertaken on the haul roads/cleared areas- most dust buckets indicates moderate deposition (except for 2 – influenced by other sources).
3.5	The proposed topsoil stockpile must be compacted to prevent erosion prior to backfilling as part of concurrent rehabilitation, should the topsoil be placed on a certain area for longer period, this should then be covered or vegetated to prevent sediment erosion.	4	No erosion at the topsoil stockpiles.
3.6	There are no feasible measures to avoid/prevent this impact when undertaking a mining project, however, the following measures can be applied to manage/limit the significance of this impact;	N/A	Statement.
3.7	Proposed opencast pits must be limited to the development footprint area to minimize loss of runoff; and	4	Current and proposed opencast pits are located within the Mining Rights boundaries.
3.8	All disturbed areas should be rehabilitated immediately as per the recommendations in the Rehabilitation Report (Digby Wells, 2017a).	2	Good, progressive rehabilitation of opencast mining areas however, several historically disturbed areas have not been rehabilitated.
3.9	Vehicles must only be serviced within designated service bays;	4	Servicing of vehicles was undertaken within designated service areas.
3.10	The management of general and other forms of waste must ensure collection and disposal into clearly marked skip bins that can be collected by approved contractors for disposal to the appropriate disposal sites;	2	Inadequate waste management at the salvage yard - limited waste skips were available - a substantial amount of waste was not placed within waste skips and consequently, left lying on the ground.

GEO SOIL AND WATER CC

Reference	Mitigation Measures	Compliance Rating	Comments/ Verification
3.11	The fuel, lubricant and explosives storage facilities must be located on a hard-standing area (paved or concrete surface that is impermeable), roofed and bunded in accordance with SANS1200 specifications. This will prevent mobilization of leaked hazardous substances;	0	The fuel storage tanks were placed within a bunded area however; the bund had a drain without a valve that allowed the contaminated water to flow into the environment. Evidence of seepage through the walls of the bund indicated that the bund was not appropriately sealed to ensure impermeability. Additionally, the fuel storage area was not roofed as per the EMP requirement.
3.12	All storm water management measures must be implemented for the various areas within the Elandsfontein Colliery which is discussed in further detail in Section 7 of the Storm Water Management Plan (Appendix F);	2	Evidence of erosion and ponding of water near the wetland/watercourse. Dirty and clean stormwater was not separated and dirty water was not adequately contained.
3.13	An emergency spillage response plan and spill kits should be in place and accessible to the responsible monitoring team. The Material Safety Data Sheets (MSDS) should be kept on site for the Life of Mine for reference to anytime in terms of handling;	4	The emergency spillage response plan is included in the Elandsfontein Colliery - Occurrence Management Plan.
3.14	Dirty water emanating from the dirty water areas is currently being collected and conveyed to the PCD for re-use within the mine. Should the contained water be more than the water use requirements, the Best Practice Guidelines (BPGs) advise that the water be recycled or as the last resort be treated to acceptable levels and discharged to the natural environment or be supplied to other industries as a lower grade of water;	N/A	Noted.
3.15	The dirty water collection trenches should be cleaned regularly to reduce silt build up and ensure they are able to accommodate and convey the 1:50 year peak flows, this should be constructed as per the storm water management plan prepared by Digby Wells, 2017;	2	Inadequate containment of dirty water from the dirty water areas.
3.16	Stockpiling should be monitored so that the side slopes do not encourage erosion of the slopes resulting in silt transported into the trenches from the stockpiles, allowing some silt to settle on the dirty water site rather than in the channels; and	4	No extensive erosion at the stockpiles.
3.17	Existing water quality monitoring should continue to be undertaken to ensure that pollution sources can be kept in check during operational activities and in the unlikely event of any spillages the downstream impacts can be estimated.	4	Monthly surface water quality and quarterly groundwater quality monitoring is taking place.
3.18	Use of accredited contractors for removal or demolition of infrastructure is recommended; this will reduce the risk of waste generation and accidental spillages;	N/A	The mine is in the operational phase.

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Reference	Mitigation Measures	Compliance Rating	Comments/ Verification
3.19	The constructed storm water management infrastructure will have to remain until post closure to ensure dirty water is captured and contained during removal of infrastructures;	N/A	The mine is in the operational phase.
3.20	Ensure that the infrastructure (fuel storage areas, pumps, pipelines etc.) are first emptied of all residual material before decommissioning and disposed of by an accredited hazardous waste remover; and	N/A	The mine is in the operational phase.
3.21	Ensure that the surface profile is rehabilitated to promote natural runoff drainage and avoid ponding of water within the rehabilitated area. Surface inspection should be continuously undertaken to ensure that runoff is draining correctly onto the surrounding streams.	N/A	The mine is in the operational phase.
4	Air Quality		
4.1	Site clearing must be done in phases;	4	Site clearing is undertaken in phases.
4.2	Ensure dust suppressant are utilised on the dirt road and exposed areas;	4	Dust suppression with water is undertaken on the haul roads/cleared areas- most dust buckets indicates moderate deposition (except for 2 – influenced by other sources).
4.3	Should high wind speeds be experienced (wind speed ≥ 5.4 m/s), dust generating activities should be kept to a minimum until the wind speeds are reduced;	N/A	Normal wind speeds were experienced.
4.4	Set maximum speed limits, and to have these limits enforced;	4	Speed limits are enforced.
4.5	The area of disturbance at all times must be kept to a minimum and no unnecessary clearing, digging or scraping must occur, especially on windy days (with wind speed ≥ 5.4 m/s); and	2	The area of disturbance is minimised, as far as possible. Progressive rehabilitation is taking place in the mining areas however; there is a rehabilitation backlog on historically mined areas.
4.6	The drop heights when loading onto trucks and at tipping points should be minimised.	4	No concerns during the loading and tipping of material.
4.7	Wet drilling; and	N/A	Unclear mitigation measure.
4.8	Undertake blast activities on less windy days (≥ 5.4 m/s).	N/A	No blasting activities occurred; as such this condition was not verified.
4.9	The drop heights when loading onto trucks and at tipping points should be minimised;	4	No concerns during the loading and tipping of material.
4.10	The use of dust suppressants and binders on haul roads to reduce dust generation; and	N/A	Dust suppression with water is undertaken on the haul roads/cleared areas- most dust buckets indicates moderate deposition (except for 2 – influenced by other sources).

Reference	Mitigation Measures	Compliance Rating	Comments/ Verification
4.11	Ensure speed limits are set on haul roads and to have these limits enforced. It is confirmed that the dust generating capacity of particles less than 10 micro meters is reduced by 58% when speed controls are reduced from 25 mph (40 km/h) to 10 mph (16 km/h) (Flocchini et al., 1994; Watson et al., 1996).	4	Speed limits are enforced. Dust suppression with water is undertaken on the haul roads/cleared areas- most dust buckets indicates moderate deposition (except for 2 – influenced by other sources).
4.12	Enclosure of crushers; and	N/A	From reading the condition, it is not clear if it is required that the crushers should be closed. No excessive dust at the crushers.
4.13	Application of fogging system at the crusher.	N/A	From reading the condition, it is not clear if it is required that a fogging system should be implemented or if it is a recommendation, if dust limits are exceeded. No excessive dust at the crushers.
4.14	The dismantling area must be kept to a minimum;	N/A	The mine is in the operational phase.
4.15	Drop heights when offloading materials offsite must be minimised;	N/A	The mine is in the operational phase.
4.16	Rehabilitated landscape should be vegetated;	N/A	The mine is in the operational phase.
4.17	Use of dust suppressant on dirt roads and exposed areas;	N/A	The mine is in the operational phase.
4.18	Ensure speed limits are set on haul roads and to have these limits enforced. It is confirmed that the dust generating capacity of particles less than 10 micro meters is reduced by 58% when speed controls are reduced from 25 mph (40 km/h) to 10 mph	N/A	The mine is in the operational phase.
4.19	(16 km/h) (Flocchini <i>et al.</i> , 1994; Watson <i>et al.</i> , 1996); and	N/A	The mine is in the operational phase.
4.20	Should high wind speeds be experienced (wind speed ≥ 5.4 m/s), dust generating activities should be kept to a minimum until the wind speeds are reduced.	N/A	The mine is in the operational phase.
4.21	The dismantling area must be kept to a minimum;	N/A	The mine is in the operational phase.
4.22	Drop heights when offloading materials for rehabilitation must be minimised;	N/A	The mine is in the operational phase.
4.23	Should high wind speeds be experienced (wind speed ≥ 5.4 m/s), dust generating activities should be kept to a minimum until the wind speeds are reduced;	N/A	The mine is in the operational phase.
4.24	Rehabilitated landscape should be vegetated;	N/A	The mine is in the operational phase.
4.25	Use of dust suppressant on dirt roads and exposed areas; and	N/A	The mine is in the operational phase.

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Reference	Mitigation Measures	Compliance Rating	Comments/ Verification
4.26	Ensure speed limits are set on haul roads and to have these limits enforced. It is confirmed that the dust generating capacity of particles less than 10 micro meters is reduced by 58% when speed controls are reduced from 25 mph (40 km/h) to 10 mph (16 km/h) (Flocchini et al., 1994; Watson et al., 1996).	N/A	The mine is in the operational phase.
5	Noise		
5.1	Ensure blast and vibration monitoring is undertaken to ensure blast levels are kept below the required standard;	4	Vibration monitoring is undertaken - no exceedances were reported, as per Plantcor (Pty) Ltd Report, dated 2017-2019.
5.2	Ensure that all vehicles are serviced and maintained on a regular basis (as per manufacturer specifications) to prevent excessive noise generation; and	4	No excessive noise from vehicles. Ambient noise measurements were undertaken at four (4) sensitive receptors in the vicinity - the audible activities emanating from the mine was not defined as a noise nuisance, as per Bi-Annual Noise Monitoring Report, GSW dated July 2019.
5.3	Ensure vehicles only operate between 6 am and 6 pm however in some cases due to overtime requirements the machines may operate until 10 pm.	0	The mine is operating 24 hours.
6	Fauna and Flora		
6.1	The <i>Hyparrhenia-Themeda</i> grassland area and associated grassland corridor should be excluded from the mine plan to prevent deterioration of this area;	2	A section of <i>Hyparrhenia-Themeda</i> grassland was mined. The DWS provided relaxation of the wetland buffer zones however, the conditions of the EMPr remains binding until the EMPr conditions have been amended.
6.2	A small nursery area should be established on site where plant species that are native to the pea family (<i>Fabaceae</i>) and to the regional vegetation type can be planted and harvested for rehabilitation of mined and impacted areas;	0	No nursery was established.
6.3	The footprint area should be kept as small as possible and only existing access roads should be used to reach the site for clearing and vehicles should not be allowed to traverse natural areas or leave the demarcated road; and	4	The footprint in the mining areas is minimised, as far as possible. Designated access roads are used.
6.4	An alien invader management plan should be implemented, whereby the disturbed site is monitored quarterly for at least two years to ensure that alien invasion does not take place.	2	An Alien Invasive Plant Management Plan is available but not fully implemented. Removal of invader tree species has commenced.
6.5	Erect signage to enforce speed limits;	2	Speed limit signage was erected but not on all haul/access roads.
6.6	Restrict vehicle movement to daylight hours;	0	The mine is operating 24 hours.

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Reference	Mitigation Measures	Compliance Rating	Comments/ Verification
6.7	Additional surveys should be conducted to determine the presence of Grass Owl and Serval on site. If these species are present, a management plan should be implemented;	0	Grass Owl and Serval Surveys are not undertaken.
6.8	and concurrent rehabilitation should take place.	2	Good, progressive rehabilitation of opencast mining areas however, several historically disturbed areas have not been rehabilitated.
6.9	Erect signage to enforce speed limits;	2	Speed limit signage was erected but not on all haul/access roads.
6.10	Restrict vehicle movement to daylight hours (6 am to 6 pm); and	0	The mine is operating 24 hours.
6.11	Concurrent rehabilitation should take place.	2	Good, progressive rehabilitation of opencast mining areas however, several historically disturbed areas have not been rehabilitated.
6.12	An alien plant species management plan should be implemented for two years;	N/A	The mine is in the operational phase.
6.13	All emergent alien plant species should be removed before they reach a seed-bearing or flowering maturity; and	N/A	The mine is in the operational phase.
6.14	At least five species should be used for rehabilitation and only species that are native to the area and stipulated in the Rehabilitation and Closure Plan (Digby Wells, 2017) should be utilised.	N/A	The mine is in the operational phase.
7	Wetland		
7.1	The mine plan should be amended to exclude the pits adjacent to wetlands (pit 3) in the west and should only include the eastern pit; unless a groundwater study can show that there will be no loss of water quantity to the wetlands;	0	Mining within Pit 3 has commenced.
7.2	Wetland offsetting can be considered as a last resort;	N/A	Statement.
7.3	All disturbed areas should be rehabilitated immediately as per the recommendations in the Rehabilitation Report (Digby Wells, 2017a);	2	Good, progressive rehabilitation of opencast mining areas however, several historically disturbed areas have not been rehabilitated.
7.4	A passive water treatment alternative should be considered to treat mine influenced water.	4	Elandsfontein Colliery is a Member of Coaltech2020, since 2014. Waterlcon was appointed in 2014 to investigate active treatment of affected; the investigation will be reinitiated once the Geohydrological Studies, as part of the Section 102 process is completed.
7.5	An alien plant management plan should be implemented; and	2	An Alien Invasive Plant Management Plan is available but not fully implemented. Removal of invader tree species has commenced.

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Reference	Mitigation Measures	Compliance Rating	Comments/ Verification
7.6	All alien trees located within the hillslope seep area underlain by the northern pit should be removed, with exception to Eucalyptus species. Eucalyptus should be kept in situ to facilitate water uptake and contaminant removal.	2	An Alien Invasive Plant Management Plan is available but not fully implemented. Removal of invader tree species has commenced.
7.7	All run-off from stock-piled areas should be diverted to the PCD's;	2	Runoff from most of the stockpile areas reported to PCDs however, it is not clear if water from the northern overburden stockpiles and coal stockpiles, report to PCDs.
7.8	Passive treatment alternatives should be considered for the treatment of mine influenced water from the PCD's 2 and 3; and	4	Elandsfontein Colliery is a Member of Coaltech2020, since 2014. Waterlcon was appointed in 2014 to investigate active treatment of affected; the investigation will be reinitiated once the Geohydrological Studies, as part of the Section 102 process is completed.
7.9	If passive treatment is not an adequate solution, active methods must be employed.	4	Elandsfontein Colliery is a Member of Coaltech2020, since 2014. Waterlcon was appointed in 2014 to investigate active treatment of affected; the investigation will be reinitiated once the Geohydrological Studies, as part of the Section 102 process is completed.
7.10	The mine plan should be amended to exclude the pits adjacent to wetlands (pit 3) in the west and should only include the eastern pit; unless a groundwater study can show that there will be no loss of water quantity to the wetlands;	0	Mining within Pit 3 has commenced.
7.11	Passive treatment alternatives should be considered for the treatment of mine influenced water from the PCD's;	4	Elandsfontein Colliery is a Member of Coaltech2020, since 2014. Waterlcon was appointed in 2014 to investigate active treatment of affected; the investigation will be reinitiated once the Geohydrological Studies, as part of the Section 102 process is completed.
7.12	Dirty water should be diverted to PCD's;	2	Not all dirty water reports to PCDs - it is not clear if water from the northern overburden stockpiles and coal stockpiles, report to PCDs.
7.13	The potential for loss of water reporting to the wetlands as a result of a cone of depression should be investigated. If this is the case, mining should be restricted from all areas that may cause a depression cone from affecting the quantity reporting to the wetlands (refer to the Groundwater Impact Assessment (Digby Well Environmental, 2015);	0	No study to determine if the cone of depression would impact on the wetland areas.
7.14	Wetland offsetting can be considered as a last resort; and	N/A	Statement.
7.15	Erosion control structures (with inputs from wetland specialist) should be designed and constructed at each road crossing of wetlands.	2	Erosion control structures for the wetland crossings have not been constructed.
7.16	Stockpiles should be located outside of the 100 m buffer around wetlands;	2	Historical stockpiles are located within 100m of wetlands.

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Reference	Mitigation Measures	Compliance Rating	Comments/ Verification
7.17	Existing access routes should be used outside of the wetland buffer zones; and	4	Existing access roads are used, as far as possible. The access roads crossing wetlands are historic access roads.
7.18	Stockpiles should be bunded, to prevent runoff into watercourses.	2	Not all dirty water reports to PCDs - it is not clear if water from the northern overburden stockpiles and coal stockpiles, report to PCDs.
7.19	A 100 m buffer zone around wetlands should be adhered to during rehabilitation activities; and Revegetate the mining area as soon as possible. Treat mine affected water, passive treatment options should be considered.	N/A	The mine is in the operational phase.
8	Aquatic		
8.1	It is recommended that, if possible, a buffer zone of 500 m is placed between large infrastructure and riparian zones or the 1:100 floodline (whichever is largest). The designated buffer zones should then be demarcated using signage or fences;	4	It is assumed that "large infrastructure" refers to beneficiation plants, shafts etc. - no large infrastructure was located within 500m of wetlands.
8.2	Revegetation of the construction footprint as soon as possible;	0	No active revegetation.
8.3	Where storm water enters river systems, sediment/silt and debris trapping, as well as energy dissipation control measures must be put in place;	4	No storm water entering directly into watercourses.
8.4	Storm water must be diverted from construction activities and managed in such a manner to disperse runoff and prevent the concentration of storm water flow;	2	Storm water trenches and berms are present in most areas however; there is erosion within the access road leading to the wetland/watercourse, close to Western Opencast Pit.
8.5	Sequential removal of the vegetation (not all vegetation immediately); and	4	Removal of vegetation is done sequentially.
8.6	The revegetation of unpaved roadsides.	0	No active revegetation.
8.7	Avoid: No opencast mining within the wetlands and the delineated buffer zones;	2	Mining occurs within the wetland buffer zones. The DWS provided relaxation of the wetland buffer zones however, the conditions of the EMPr remains binding until the EMPr conditions have been amended.
8.8	Erosion control should be implemented to ensure rivers/streams are not silted up;	2	Erosion at the access road leading up to the watercourse.
8.9	Mitigate: Rehabilitation plan to create artificial wetland systems; and	2	No artificial wetlands were created for rehabilitation.

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Reference	Mitigation Measures	Compliance Rating	Comments/ Verification
8.10	Offset: Complete a Wetland Offset Strategy (as a last resort – see section 11.7).	4	A wetland offset strategy was prepared for wetlands impacted by mining.
8.11	Diversion trench and berm systems which diverts clean storm water around pollution sources and convey and contain dirty water to central pollution control impoundments;	2	Not all dirty water reports to PCDs - it is not clear if water from the northern overburden stockpiles and coal stockpiles, report to PCDs. Inadequate containment of dirty water from the dirty water areas.
8.12	Barrier systems, including synthetic, clay and geological or other approved mitigation methods to minimise contaminated seepage and runoff from entering the local aquatic systems;	0	PCDs were not lined.
8.13	Where storm water enters river systems from disturbed sites, sediment and debris trapping, as well as energy dissipation control measures must be put in place; and	4	No storm water entering directly into watercourses.
8.14	The planting of indigenous vegetation around pollution control impoundments and structures should be completed as this has been shown to be effective in erosion and nutrient control.	2	No active revegetation.
8.15	Adhere to the Wetland buffer zone	2	Mining occurs within the wetland buffer zones. The DWS provided relaxation of the wetland buffer zones however, the conditions of the EMPr remains binding until the EMPr conditions have been amended.
8.16	Effective surface water management and monitoring;	2	Not all dirty water reports to PCDs, inadequate containment of dirty water and containment facilities not lined. Monthly and quarterly water monitoring is done.
8.17	It is recommended that, if possible, a buffer zone of 500 m is placed between infrastructure to be decommissioned and riparian zones or the 1:100 floodline (whichever is largest). The designated buffer zones should then be demarcated using signage or fences;	N/A	The mine in the operational phase.
8.18	Re-vegetation of the rehabilitated footprint as soon as possible;	N/A	The mine in the operational phase.
8.19	Where storm water enters river systems, sediment/silt and debris trapping, as well as energy dissipation control measures must be put in place;	N/A	The mine in the operational phase.
8.20	Storm water must be diverted from decommissioning activities and managed in such a manner to disperse runoff and prevent the concentration of storm water flow;	N/A	The mine in the operational phase.

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Reference	Mitigation Measures	Compliance Rating	Comments/ Verification
8.21	Sequential removal of the vegetation (not all vegetation immediately); and	N/A	The mine in the operational phase.
8.22	The revegetation of unpaved roadsides.	N/A	The mine in the operational phase.
9	Social		
9.1	Development programmes to be established and implemented as stipulated in the SLP;	4	As per the Social Labour Plan Progress Report, dated September 2019, the Human Resources Development Programme was implemented.
9.2	Employment opportunities must be given to local labour sources first;	2	From the Social Labour Plan Progress Report, dated September 2019, it was not clear if employment opportunities are given to local labour sources first.
9.3	On-the-job skills training will ensure that employees have transferable skills;	4	From the Social Labour Plan Progress Report, dated September 2019, on-the-job training is being implemented.
9.4	Where additional employment opportunities arise (including short-term contract work and ad hoc opportunities), the local labour pool must be prioritized; and	2	From the Social Labour Plan Progress Report, dated September 2019, it was not clear if employment opportunities are given to local labour sources first.
9.5	The development of a local skills register (in conjunction with the local municipality) will promote the local recruitment.	2	From the Social Labour Plan Progress Report, dated September 2019, it was not clear if a local skills register was developed.
9.6	Ensure procurement policies are aligned to promote local procurement sourcing of goods. Preference to be given to the use of local service providers as far as practicable;	2	From the Social Labour Plan Progress Report, dated September 2019, it was not clear if preference is given to the use of local service providers.
9.7	Distribute procurement policies to contractors and ensure contractors abide by these; and	2	From the Social Labour Plan Progress Report, dated September 2019, it was not clear if procurement policies were distributed to contractors.
9.8	Foster relations with the local municipality and local communities to come to mutually beneficial procurement plans.	4	From the Social Labour Plan Progress Report, dated September 2019, it was reported that correspondence or meetings with local municipality and community have taken place - no details were provided.
9.9	Local economic development initiatives must be investigated in conjunction with the local municipality and local business forums;	4	From the Social Labour Plan Progress Report, dated September 2019, it was reported that correspondence or meetings with local municipality and community have taken place - no details were provided.
9.10	Continuation of existing community initiatives, including the revision of planning to accommodate the extended life of mining operations; and	4	From the Social Labour Plan Progress Report, dated September 2019, it was reported that Local Economic Development and projects were being implemented.

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Reference	Mitigation Measures	Compliance Rating	Comments/ Verification
9.11	Identification of future projects and integration of sustainable close-out plans.	4	From the Social Labour Plan Progress Report, dated September 2019, it was reported that Local Economic Development and projects were being implemented.
9.12	Downscaling and retrenchment plan, as per the SLP, must be implemented; and	N/A	The mine in the operational phase.
9.13	Throughout the life of the operation, mine management must build on current initiatives in conjunction with applicable labour unions and local government to minimize the negative effects associated with downscaling and retrenchments, such as sourcing alternative employment opportunities, broadening transferable skills.	N/A	The mine in the operational phase.

5.3 FINDINGS OF THE AUDIT

The key findings of the audit are provided in Table 5.

Table 5: Findings of the audit.

Finding Ref. #	EMPr Aspect	EMPR Requirement	Finding Description
Stormwater Management			
1	Soil, Land Use and Land Capability Surface Water	Ensure proper storm water management designs are in place. All dirty water channels must be constructed and placed within the dirty water infrastructure areas, such that all dirty water runoff emanating from these areas are captured and contained to a dirty water containment facility;	Inadequate stormwater management within the mining areas. Evidence of erosion and ponding in proximity of the wetland/watercourse. Inadequate containment of dirty water from the dirty water areas.
<p>Photographic Record:</p>  <p>Ponding and erosion near the water course and the old Western Opencast Pit.</p>			
Waste Management			
2	Surface Water	The management of general and other forms of waste must ensure collection and disposal into clearly marked skip bins that can be collected by approved contractors for disposal to the appropriate disposal sites;	Inadequate waste management at the salvage yard - limited waste skips were available - a substantial amount of waste was not placed within waste skips and consequently, left lying on the ground.

Finding Ref. #	EMPr Aspect	EMPR Requirement	Finding Description
Photographic Record:			
			
Inadequate waste management and disposal at the salvage yard.			

Spill Prevention			
3	Surface Water	The fuel, lubricant and explosives storage facilities must be located on a hard-standing area (paved or concrete surface that is impermeable), roofed and bunded in accordance with SANS1200 specifications. This will prevent mobilization of leaked hazardous substances;	The fuel storage tanks were placed within a bunded area however; the bund had a drain without a valve that allowed the contaminated water to flow into the environment. Evidence of seepage through the walls of the bund indicated that the bund was not appropriately sealed to ensure impermeability. Additionally, the fuel storage area was not roofed as per the EMPr requirement.

Photographic Record:			
			
Leaking bund, no valve to close the drain from the bund and no roof at the fuel storage area.			

Finding Ref. #	EMPr Aspect	EMPR Requirement	Finding Description
Mining Within Close Proximity to a Wetland			
4	Fauna and Flora Wetland	The <i>Hyparrhenia-Themeda</i> grassland area and associated grassland corridor should be excluded from the mine plan to prevent deterioration of this area; The mine plan should be amended to exclude the pits adjacent to wetlands (pit 3) in the west and should only include the eastern pit; unless a groundwater study can show that there will be no loss of water quantity to the wetlands;	Sensitive areas, that were recommended to be excluded from the mining plan, were mined. These areas include mining within the 100m buffer of the wetland and within the sensitive <i>Hyparrhenia-Themeda</i> grassland. It is recommended that appropriate mitigation measures, in consultation with the specialists, are implemented to remedy the contraventions with the requirements of the EMPr going forward. Approval was obtained from the DWS for the relaxation of the wetland buffer zones however; the requirement of the EMPr remains binding until such time as the requirements/conditions have been amended.
Wetland Loss of Water Study			
5	Wetland	The potential for loss of water reporting to the wetlands as a result of a cone of depression should be investigated. If this is the case, mining should be restricted from all areas that may cause a depression cone from affecting the quantity reporting to the wetlands (refer to the Groundwater Impact Assessment (Digby Well Environmental, 2015);	No evidence of a study to determine if the cone of depression would impact on the wetland areas. It is recommended that the study is undertaken as per the requirement of the EMPr.
Local Employment and Procurement			
6	Social	Employment opportunities must be given to local labour sources first. Where additional employment opportunities arise (including short-term contract work and ad hoc opportunities), the local labour pool must be prioritized. The development of a local skills register (in conjunction with the local municipality) will promote the local recruitment. Ensure procurement policies are aligned to promote local procurement sourcing of goods. Preference to be given to the use of local service providers as far as practicable. Distribute procurement policies to contractors and ensure contractors abide by these.	From the evidence provided, it could not be confirmed if procurement policies give preference to local labour or local service providers, if these policies are being implemented, if a local skills register was developed and if local procurement policies were shared with contractors.
Burial Grounds and Graves Consultation (BGGC) Process and Conservation Management Plan			
7	Heritage	All identified burial grounds and graves must be subject to a Burial Grounds and Graves Consultation (BGGC) Process to identify bona fide NoK, reach agreement on the management and access to the sites, and formalise agreements in a CMP.	Burial Grounds and Graves Consultation (BGGC) Process was completed, however, no documentation was provided on request, including a CMP (Conservation Management Plan), as required by the Elandsfontein Colliery Burial Grounds and Graves Chance Finds Procedure, Digby Wells, dated January 2019.

Finding Ref. #	EMPr Aspect	EMPR Requirement	Finding Description
Working Hours			
8	Air Quality Fauna and Flora	Ensure vehicles only operate between 6 am and 6 pm however in some cases due to overtime requirements the machines may operate until 10 pm. Restrict vehicle movement to daylight hours;	The mine is operating 24 hours, contrary to the requirements of the EMPr.
Alien Invasive Plant Management			
9	Alien Invasive Plant	An alien invader management plan should be implemented, whereby the disturbed site is monitored quarterly for at least two years to ensure that alien invasion does not take place.	An Alien Invasive Plant Management Plan is available but not fully implemented. Removal of invader tree species has commenced.

5.4 CONTINUED ADEQUACY OF THE EMPR

The continued adequacy of the EMPr is discussed in this section of the report.

5.4.1 NEW IMPACTS IDENTIFIED

Based on the areas, no new impacts were identified.

5.4.2 EFFECTIVENESS OF THE EMPR

Based on the information review and inspection - the EMPr is considered adequate and effective to manage and mitigate the activities and impacts of the mine. The deficiencies noted mainly relates to non-adherence to the requirements of the EMPr and not the adequacy and effectiveness of the EMPr.

5.4.3 SHORTCOMINGS IN THE EMPR

A Section 102 EMPr amendment process is underway for amendments to the mine plan (opencast and underground) as well as to consolidate the MR 314 MP and MR 63 MP Mining Rights.

5.4.4 RECOMMENDATIONS

It is recommended that Elandsfontein Colliery prepares an action plan to address the deficiencies identified during this EMPr audit. Some of the deficiencies might be due to the impracticality of some of the EMPr mitigation measures and amendment to these measures should be considered, where relevant.

6 PHOTOGRAPHIC RECORD



Figure 2: Removal and re-processing of the historically disposed discard within the pits in the northern section of the MR 314 MP Mining Right.



Figure 3: Use of water from PCD 3 for dust suppression.



Figure 4: PCD 3.



Figure 5: Mining within Pit 3.



Figure 6: Progressive rehabilitation of recently mined areas.



Figure 7: Plant Area.



Figure 8: Mining within Pit 1.



Figure 9: Groundwater monitoring borehole.



Figure 10: Western Opencast Pit used for containment of runoff water.



Figure 11: Unrehabilitated stockpiles on MR 63 MP.

7 CONCLUSION

GSW was appointed by Elandsfontein Colliery to undertake the 2019 EMPr Performance Assessment/ Compliance Audit to assess compliance with the conditions of- and confirm the continued adequacy of the EMPr.

The results of the audit have been described in Table 4 and the deficiencies are listed in Table 5. Based on the evaluation criteria described in Section 4.2 a total compliance score of **64.13%** was obtained, 9 findings/deficiencies were raised. A Section 102 EMPr amendment is being undertaken to amend the mining areas (opencast and underground), as well as consolidate the MR 314 MP and MR 63 MP Mining Rights.

Elandsfontein Colliery should be reminded of the requirements of Regulations 34 of the EIA Regulations, 2014 with regards to findings of the adequacy of the EMPr. Regulation 34 states:

- 4) *“Where the findings of the environmental audit report contemplated in sub-regulation (1) indicate-*
 - a) *insufficient mitigation of environmental impacts associated with the undertaking of the activity; or*
 - b) *insufficient levels of compliance with the environmental authorisation or EMPr and, where applicable the closure plan;*

the holder must, when submitting the environmental audit report to the competent authority in terms of sub-regulation (1), submit recommendations to amend the EMPr or closure plan in order to rectify 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.*
- 6) *Within 7 days of the date of submission of an environmental audit report to the competent authority, the holder of an environmental authorisation must notify all potential and registered interested and affected parties of the submission of that report, and make such report immediately available-*
 - a) *to anyone on request; and*
 - b) *on a publicly accessible website, where the holder has such a website.”*

8 ASSUMPTIONS, LIMITATIONS AND GAPS IN KNOWLEDGE

The following assumptions, limitations and gaps in knowledge apply to the audit:

- The information contained in this report was sourced from information and data supplied by third parties that is assumed to be complete, valid and true.
- This report is based on information available at the time of the assessment. The information, data, observations and evidence on what this report is based is beyond the control of GSW and may change without notice. GSW will not be liable for any loss or damage which may arise directly or indirectly because of such changes.

- No representation or warranty, express or implied, is or will be made in relation to, and no responsibility or liability is or will be accepted by GSW in relation to the accuracy of this report.
- Where reference is made to legislation or other statutory provisions in this report the original legislation or other statutory provisions will always take precedence and the reader is directed to revert to the original legislation or statutes.
- As a result of time constraints, the site inspection did not include all the operational/ decommissioned areas. Future audits should aim to inspect the areas which were not visited during this inspection.
- The EMPr for MR 63 MP was not available for auditing purposes. As such, the MR 63 MP area has been audited against the requirements of the MR 314 EMPr and were considered during the completion of the compliance evaluation.
- This audit does not specifically assess compliance with any other permits, licences or authorisations applicable to the operations.