

**THE PLAN OF STUDY REPORT
FOR
FOR THE INTEGRATED
ENVIRONMENTAL IMPACT
ASSESSMENT, WASTE MANAGEMENT
LICENSE AND WATER USE LICENSE
PROCESSES FOR THE WET FLUE GAS
DESULFURISATION (WFGD) WASTE
DISPOSAL FACILITIES FOR MEDUPI
POWER STATION, WITHIN THE
JURISDICTION OF LEPHALALE LOCAL
MUNICIPALITY,
LIMPOPO PROVINCE**

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Date Issued: 29 June 2026

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QMS – ENV-BAR- WUL	PLAN OF STUDY REPOR	REV 001
		Page 0 of
		Year: 2026

DOCUMENT STATUS			
Client	Eskom Holdings SOC Ltd		
Project Name	Integrated Environmental Impact Assessment, Waste Management License and Water Use License Processes for the Wet Flue Gas Desulphurisation (WFGD) Waste Disposal Facilities in Medupi Power Station, Limpopo Province		
Document Name	Plan of Study		
Project Number (Internally)	05_0525A_Eskom Medupi		
Version	001		
Issued Date	29 June 2026		
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<i>This document has been approved for publishing by:</i>			
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THE PLAN OF STUDY REPORT FOR THE PROPOSED INTEGRATED ENVIRONMENTAL IMPACT ASSESSMENT AND WASTE MANAGEMENT LICENSE PROCESSES FOR THE WET FLUE GAS DESULFURISATION (WFGD) WASTE DISPOSAL FACILITIES FOR MEDUPI POWER STATION, LIMPOPO PROVINCE

Contents	Page
1 INTRODUCTION.....	5
1.1 Project Background.....	5
2 PURPOSE OF THE PLAN OF STUDY.....	6
2.1 Applicant's and EAP's Details.....	7
2.2 Summary of Project Description.....	7
2.3 Summary of Legislative Context.....	8
2.4 Summary of the Scoping Phase.....	8
2.4.1 Study Area.....	8
2.4.2 Description of the Alternatives.....	8
2.4.3 Summary of Public Participation Undertaken.....	9
2.4.4 Consultation with the CA (DFFE)	10
2.4.5 Description of Aspects to be Assessed	10
2.5 Impact Assessment Methodology	15
3 ENVIRONMENTAL IMPACT ASSESSMENT PHASE.....	19
3.1 Purpose.....	19
3.2 Proposed Approach and Methodology	19
4 PUBLIC PARTICIPATION PROCESS	21
4.1 Advertising	22
4.2 Interaction with the Competent Authority.....	22
4.3 Developing a Strategy and Resolving Key Issues	23
5 SPECIALIST STUDIES.....	23
5.1.1 Agricultural Impact Assessment.....	24
5.1.2 Landscape/Visual Impact Assessment	25
5.1.3 Archaeological and Cultural Heritage Impact Assessment	25
5.1.4 Palaeontology Impact Assessment	26
5.1.5 Terrestrial Biodiversity (Flora & Fauna) Impact Assessment.....	26
5.1.6 Avifauna Impact Assessment.....	26
5.1.7 Aquatic Biodiversity Impact Assessment	27
5.1.8 Hydrology/Geohydrology Assessment.....	27
5.1.9 Traffic Impact Assessment.....	28
5.1.10 Geotechnical Investigation Assessment	28
5.1.11 Climate Impact Assessment	29
5.1.12 Socio-Economic Assessment	29
5.1.13 Ambient Air Quality Impact Assessment.....	30
5.1.14 Ambient Noise Impact Assessment	30
5.1.15 Dispersion Modelling Study	31
6 REQUIREMENTS FOR A WASTE LICENSE REPORT	32
7 EIA REPORT REQUIREMENTS	33
8 TASKS TO BE UNDERTAKEN AS PART OF THE EIA.....	33
9 MITIGATION OF IMPACTS	34
10 COLLATING AVAILABLE INFORMATION AND IDENTIFYING KNOWLEDGE GAPS	35

10.1	Public Input	35
11	CONCLUSION AND WAY FORWARD	35
11.1	Conclusion	35
11.2	Way Forward	36

List of Figures

Figure 1: Scoping and Environmental Impact Assessment Process	20
Figure 2: Waste Hierarchy	34

List of Tables:

Table 1: Client's Details	7
Table 2: Environmental Assessment Practitioner's Details	7
Table 3: Preliminary Impacts Identified	12
Table 4: Impact Rating Matrix	15
Table 5: List of Specialist Studies to be Undertaken	23
Table 6: Proposed Programme	33

1 INTRODUCTION

The Scoping process of the Environmental Impact Assessment (EIA) is fundamental as it allows for the identification of potential impacts on the environment, as well as facilitation of the process of compiling the EIA and Environmental Management Programme (EMPr). The draft Scoping Report will be compiled using the information from the client, specialist studies, site visits, literature reviews as well as previous environmental studies conducted in the area, it therefore, provides a comprehensive baseline of the environment at the proposed site. This Scoping Process has followed the appropriate standards and procedure for the EIA application, as set out in the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA), as amended, and the EIA Regulations of April 2021 as amended. The Scoping report includes a description of the various alternatives and indicates those alternatives, which should be pursued as part of the detailed assessment of the EIA process. The impact significance of the proposed activity on the environment will be assessed in the EIA phase with the assistance of various specialist studies.

The purpose of this section is to outline how the EIA for the proposed Construction of Wet Flue Gas Desulphurisation (WFGD) Waste Disposal Facilities for Medupi Power Station within Lephalale Local Municipality, Limpopo Province will proceed during the EIA phase. The detailed assessment phase of the EIA process entails the integration of the specialist studies for those potential impacts evaluated to be of significance. Relevant mitigation measures will be used to compile an EMPr. This section provides specific terms of reference and impact assessment methodology for utilisation by the specialist team. The Plan of study for EIA also outlines the remainder of the Public Participation Process in terms of the NEMA EIA Regulations as amended.

1.1 Project Background

Medupi Power Station forms part of Eskom's capital expansion programme and is a large coal-fired facility located near Lephalale in the Limpopo Province. With an installed capacity of six 794 MW units, the station utilises boiler technology and dry-cooling systems to improve efficiency and reduce water consumption in a water-scarce region. The facility operates under an Atmospheric Emission Licence issued in terms of the National Environmental Management: Air Quality Act, which requires the continuous reduction of Sulphur dioxide (SO₂) emissions.

In line with national air quality requirements, including the Minimum Emission Standards (MES), and the World Bank loan condition, Eskom is required to implement effective SO₂ abatement measures. The selected technology for this purpose was a Wet Flue Gas Desulphurisation (WFGD), a proven system capable of achieving high SO₂ removal efficiencies. The WFGD retrofit at Medupi was authorised in 2018 and will generate by-products, including gypsum, chemical salts, and sludge, which require disposal.

A feasibility study undertaken by Selahle CP on behalf of Eskom. Eskom provided potential sites for the disposal of these WFGD by-products. The feasibility study considered environmental sensitivities, land use constraints, and operational requirements. Due to spatial limitations and competing land uses, only one preferred site was selected with a reduced operational lifespan. The disposal of WFGD waste streams and transportation triggers the need for an integrated environmental authorisation.

This Scoping Process is in compliance with the requirements set out in the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA), as amended, and the EIA Regulations, 2014, as amended. The Scoping Study includes a description of the various alternatives and indicates those alternatives which should be pursued as part of the detailed assessment of the EIA process. The impact significance of the proposed activity on the environment will be assessed in the EIA phase with the assistance of the various specialist studies.

The purpose of this section is to outline how the EIA for the proposed WFGD waste disposal facility project will proceed during the EIA phase. The detailed assessment phase of the EIA process entails the integration of the specialist studies for those potential impacts evaluated to be of significance. In addition to the identified impacts during the scoping, the final scoping report and plan of study will include any project-related impacts that may be raised during the public participation process. Relevant mitigation measures will be used to compile an EMPr. This section provides specific terms of reference and impact assessment methodology for utilisation by the specialist team. The Plan of Study for EIA also outlines the remainder of the PPP as well as the process in terms of the EIA Regulations.

2 PURPOSE OF THE PLAN OF STUDY

The Plan of Study for EIA is intended to provide a summary of the key findings of the Scoping Phase and to describe the activities to be undertaken in the Impact Assessment Phase of the EIA process. The requirements of Appendix 2 (2)(1)(h) of the EIA Regulations 2014, as amended, promulgated in terms of Section 24 of the National Environmental Act, 1998 (Act 107 of 1998) have been taken into consideration when compiling this scoping report and are as follows:

- i. a description of the alternatives to be considered and assessed within the preferred site, including the option of not proceeding with the activity;
- ii. a description of the aspects to be assessed as part of the environmental impact assessment process;
- iii. aspects to be assessed by specialists;
- iv. a description of the proposed method of assessing the environmental aspects, including aspects to be assessed by specialists;
- v. a description of the proposed method of assessing duration and significance;
- vi. an indication of the stages at which the competent authority will be consulted;
- vii. particulars of the public participation process that will be conducted during the environmental impact assessment process; and
- viii. a description of the tasks that will be undertaken as part of the environmental impact assessment process;
- ix. identify suitable measures to avoid, reverse, mitigate or manage identified impacts and to determine the extent of the residual risks that need to be managed and monitored.

The EAP will ensure that the entire process is undertaken as stipulated in the Regulations.

2.1 Applicant's and EAP's Details

Table 1: Client's Details

APPLICANT'S DETAILS	
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2.2 Summary of Project Description

The proposal entails the development and operation of WFGD waste disposal facilities for gypsum, chemical salts, and sludge that will be generated during the desulphurisation process at the Medupi Power Station. The project will also include transportation of these waste by-products through rail, road or conveyor belts from the intermediate disposal sites to the final (proposed) Waste Disposal Sites. An EA was granted by the DEA (known as DFFE) for the development and operation of the WFGD plant, wastewater treatment plant, and intermediate waste storage facilities. The proposed activities will be limited to the waste disposal site, conveyance and associated infrastructure.

The proposed waste disposal facilities aim to ensure that all WFGD by-products are disposed of and managed sustainably in accordance with the applicable waste management legislation and Norms and Standards. It is anticipated that gypsum will be disposed of over 45 years on a site measuring approximately 105 hectares in extent. The remaining 25.2 ha of the site will be used for the disposal of chemical sludge and salts, as well as associated infrastructure.

2.3 Summary of Legislative Context

A summary of the applicable legislation is provided below for the proposed WFGD waste disposal site.

- National Environmental Management: Waste Act No 59 of 2008
- The National Environmental Management: Air Quality Act No 39 of 2004
- Waterberg Bojanala Priority Area Air Quality Management Plan in terms of the National Environmental Management: Air Quality Act No 39 of 2004
- National Water Act No 36 of 1998;
- GN R1179 (GG 16536 of 25 August 1995) – Hazardous Chemical Substances Regulations promulgated in terms of the Occupational Health and Safety Act No 85 of 1993;
- Hazardous Substances Act No 15 of 1973
- Constitution of South Africa, 1996 (with reference to noise)
- Explosives Act No 26 of 1956 and Regulation 1604 of 8 September 1972;
- National Environmental Management Act No 107 of 1998 (with reference to noise and prevention of pollution)
- National Environmental Management: Biodiversity Act No 10 of 2004 (in respect of Fauna, Flora and National Heritage Resources)
- Conservation of Agricultural Resources Act No 43 of 1989 (in respect of Fauna, Flora and National Heritage Resources)
- National Forest Act No 84 of 1998 (in respect of protected trees)
- National Veld and Forest Fire Act No 101 of 1998
- National Heritage Resources Act No 25 of 1999
- Promotion of Access to Information Act No 2 of 2000 (in respect of record-keeping and interested and affected parties and monitoring of environmental impacts)
- National Road Traffic Act No 93 of 1996
- Lephalale Local Municipality By-Laws
 - Spatial Planning and Land Use Management (SPLUMA) By-law
 - Planning Tribunal and Appeal Authority.Waste Management By-Law
 - Street Trading By-law
 - .Water Supply and Sanitation Services By-Law
 - .Customer Care and Revenue Management By-Law
 - .Stormwater Management By-Law

A full legal review will be undertaken during the EIA phase of the project.

2.4 Summary of the Scoping Phase

2.4.1 Study Area

Medupi Power Station is situated west of Lephalale township, within Ward 15 Lephalale Local Municipality, under the Waterberg District Municipality in Limpopo Province, South Africa (Refer to Figure 5). The proposed sites are located east of the Medupi Power Station and can be accessed via the R510 road.

2.4.2 Description of the Alternatives

The Plan of Study involves the assessment of feasible site alternatives through a feasibility (screening) study that was undertaken for six potential sites that are located around the Medupi Power Station. The

feasibility study identified the site's Best Practicable Environmental Option. The selected site had spatial constraints, and this would result in a reduced disposal lifespan of the proposed waste. The site adjacent to the proposed (preferred site) will also be considered as a potential location alternative.

Other alternatives considered during the scoping phase will include technology and design alternatives, including different lining materials (such as the potential use of classified ash from Medupi and Matimba Power Stations), waste handling methods, and layout designs. Route alternatives for the transportation of waste via pipelines, conveyors, or road networks will also be evaluated to minimise environmental and social impacts.

The EIA phase will also consider water and energy management process-related alternatives, including water management approaches aligned with Eskom's zero liquid discharge strategy. Finally, the no-go alternative will be assessed to understand the implications of not proceeding with the project, particularly in terms of continued SO₂ emissions and non-compliance with NEM: AQA, MES requirements and the conditions of the World Bank loan agreement.

2.4.3 Summary of Public Participation Undertaken

The extensive database of stakeholders developed during the scoping process will be used as a basis to ensure that those stakeholders involved in the Scoping Phase also participate in the EIA phase. The database will also be expanded to include I&APs that wish to be involved in the process. Registered I&APs will be informed of the availability of the Draft EIA Report for review. All I&APs will be notified of the progress to date and availability of the Draft EIR, via mail, email and advertisements in local newspapers. A legislated period of 45 calendar days will be allowed for public comment. Reports will be made available in the following way:

Distribution for comment at central public places, which were used during the scoping phase. Provision has been made for the placement of the reports at venues.

- The document will be made available to download from SCP's website
- Hard copies will be made available at public locations.
- Copies of CDs/USBs will be made available on request.

A public meeting/s is proposed to be held during this phase (venue to be confirmed). The meeting will be facilitated by key members of the PPP project team. The purpose of the public meeting will be to present the findings of the impact assessment. Focus group meetings will be held, if required, in accordance with topics of concern raised during the scoping phase as well as the assessment phase. I&APs will be allowed to debate and discuss key issues and concerns.

All comments received during the EIA phase will be recorded in the comments and response report, which will be included in the draft and final EIR. The final EIR will incorporate public comment received on the Draft EIR and will be made available for public review, with hard copies distributed mainly to the authorities and key stakeholders.

All I&APs will receive a notification letter that details the outcome/decision of the CA.

2.4.4 Consultation with the CA (DFFE)

The pre-application meeting with DFFE has been undertaken. The following steps engaging the CA will be through the submission of the application for the integrated environmental authorisation, including reports such as the Draft and Final Scoping reports and the draft and final EIR that will include the EMP, CRR, WLR and specialist assessments to the relevant units within the Department of Forestry, Fisheries and the Environment (Biodiversity and Waste units).

2.4.5 Description of Aspects to be Assessed

The proposed waste disposal facilities will be associated with the identified impacts. These impacts will be assessed during the EIA phase and mitigated. Impacts raised during the PPP and during the specialist assessment will form part of the EIA phase.

A screening report was generated for the proposed sites and transportation routes. The screening report indicated that the Aquatic Biodiversity, Palaeontology, and Terrestrial Biodiversity themes were very high sensitivity. The agriculture theme indicated a high sensitivity, and the following specialist assessments were identified to be undertaken as part of the impact assessment for the proposal:

- Agricultural Impact Assessment
- Landscape/Visual Impact Assessment
- Archaeological and Cultural Heritage Impact Assessment
- Palaeontology Impact Assessment
- Terrestrial Biodiversity Impact Assessment
- Aquatic Biodiversity Impact Assessment
- Hydrology Assessment
- Noise Impact Assessment
- Traffic Impact Assessment
- Geotechnical Assessment
- Climate Impact Assessment
- Health Impact Assessment
- Socio-Economic Assessment
- Ambient Air Quality Impact Assessment
- Seismicity Assessment
- Plant Species Assessment
- Animal Species Assessment

A Site Sensitivity Verification (SSV) was undertaken under Appendix E of this report to confirm the current use of the land and the environmental sensitivity of the site under consideration (i.e. a proposed development sites where an Environmental Authorisation (EA) in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA) and associated 2014 Environmental Impact Assessment (EIA) Regulations, as amended, is required) as identified by the national web based environmental screening tool.

This should be undertaken prior to commencing with any specialist assessment/s. The site sensitivity verification must be undertaken using:

- A desktop analysis, using satellite imagery;
- A preliminary on-site inspection; and,

- Any other available and relevant information.

The following is recorded within this report:

- Confirm or dispute the current use of the land and the environmental sensitivity as identified by the screening tool, such as new developments or infrastructure, the change in vegetation cover or status etc.; and,
- Contain a motivation and evidence (e.g. photographs) of either the verified or different use of the land and environmental sensitivity.

The below-mentioned identified impacts will be investigated in more detail during the EIA phase of the project.

Table 3: Preliminary Impacts Identified

PHYSICAL CONDITION OF THE STUDY	AREA POTENTIAL ENVIRONMENTAL IMPACT
Biophysical Impacts	
Geology	- Impacts related to the construction-related earthworks. - Impacts related to pollution in case of spillage/leakage of hydrocarbon and other hazardous material from disposal facilities
Groundwater	- Contamination of groundwater due to hydrocarbon spillage and seepage into groundwater reserves, affecting groundwater quality. - Further construction of infrastructure and compaction of the area will further contribute to reduced water infiltration rates to replenish groundwater aquifers. - Change in the hydrological cycle.
Soil and Agricultural Potential	- Pollution of soil due to handling, use and storage of hazardous substances during construction and operation. - The loss of available topsoil. - Key variables that determine the land capability of the study area, such as soil fertility, are reduced and disturbed due to the potential activities related to the waste disposal facility. - Reduction and loss of arable or grazing land - Erosion - Loss of vegetation - Loss of habitat for fauna - Waterlogging and poor drainage - Salinisation - Organic matter depletion
Avifauna	- Habitat destruction within the project footprint; - Destruction, degradation and fragmentation of surrounding habitats due to noise and dust pollution; - Displacement/emigration of avifauna community (including SCC); - Direct mortality from persecution or poaching of avifauna species and collection of eggs; - Direct mortality from increased vehicle and heavy machinery traffic.

PHYSICAL CONDITION OF THE STUDY	AREA POTENTIAL ENVIRONMENTAL IMPACT
	▪ Direct mortality from roadkill, persecution or poaching of avifauna species and collection of eggs; ▪ Direct mortalities and hindrance of movement from fencing infrastructure; ▪ Leachate or runoff from waste disposal sites may contaminate nearby water bodies; ▪ Accumulation of heavy metals or other toxins can lead to bioaccumulation in birds because of pollution of the surrounding habitats. ▪ Collisions into and drownings in the open dams.
Surface Water	▪ Impacts on surface water quality; ▪ Impacts on hydrology; ▪ Impacts related to erosion and sedimentation; ▪ Impacts on aquatic biota; and ▪ Impacts on aquatic ecosystem services
Biodiversity	▪ Direct impacts on threatened flora species; ▪ Direct impacts on protected flora species; ▪ Direct impacts on threatened faunal taxa; ▪ Direct impacts on common fauna species/ faunal assemblages (including migration patterns, corridors, etc.); ▪ Human - Animal conflicts; ▪ Loss or degradation of natural vegetation/ pristine habitat (including ecosystem functioning); ▪ Loss/ degradation of surrounding habitat; ▪ Impacts on South Africa's conservation obligations & targets; ▪ Increase in local and regional fragmentation/ isolation of habitat; and ▪ Increase in environmental degradation, pollution (air, soils, surface water). ▪ Soil chemistry changes from dust/leachate ▪ Erosion and sedimentation
Climate Change	▪ Air quality ▪ Socio-economic ▪ Health impacts ▪ Increased heat stress

PHYSICAL CONDITION OF THE STUDY	AREA POTENTIAL ENVIRONMENTAL IMPACT
	- Increased vector and waterborne diseases - Reduced food security - Decreased quality of drinking water - Increased risk to livestock
Social Impacts	
Air Quality	Increase in dust-generating activities during construction and operation.
Visual	- Impact on the current visual landscape. - Impact on sensitive receptors,
Heritage	- Identify the potential heritage sites within the study area - Identify any impacts (if any) that may occur on these sites because of the disposal activities
Socio-Economic	- Perceptions and fears associated with the proposed disposal facilities and by-products - Local, site-specific issues. - Health-related impacts such as developmental disorders and chronic diseases. - High mortality - Employment - Land use interference - Traffic and safety - Small business opportunities - Social perception and trust - Community opposition - Emotional distress - Legal issues potentially resulting in formal objections during the EIA process.
Possible Cumulative Impacts	
	- Cumulative impacts from air emissions from power stations, their ash dumps and other sources of air pollution - Dust - Further fragmentation of the ecosystem - Groundwater impacts

2.5 Impact Assessment Methodology

The objective of the assessment of impacts is to identify and assess all the significant impacts that may arise as a result of the proposed waste disposal site activities. The process of assessing the impacts of the project encompasses the following four activities:

- Identification and assessment of potential impacts;
- Prediction of the nature, magnitude, extent and duration of potentially significant impacts;
- Identification of mitigation measures that could be implemented to reduce the severity or significance of the impacts of the activity; and
- Evaluation of the significance of the impact after the mitigation measures have been implemented, i.e. the significance of the residual impact.

The possible impacts associated with the project were primarily identified in the scoping phase through a site visit and desktop study. In the impact assessment phase, additional impacts will be identified through more in-depth specialist investigations to be undertaken and through the ongoing consultation process with interested and affected parties. Specialists will be required to assess the significance of potential impacts in terms of the following criteria:

- Cumulative impacts
- Nature of the impact
- Extent of the impact
- Intensity of the impact
- Duration of the impact
- Probability of the impact occurring
- Impact non-reversibility
- Impact on irreplaceable resources and Confidence level

The impacts will be assessed in terms of the following criteria:

Table 4: Impact Rating Matrix

NATURE		
Include a brief description of the impact of environmental parameter being assessed in the context of the project. This criterion includes a brief written statement of the environmental aspect being impacted upon by a particular action or activity.		
GEOGRAPHICAL EXTENT		
This is defined as the area over which the impact will be expressed. Typically, the severity and significance of an impact have different scales and as such bracketing ranges are often required. This is often useful during the detailed assessment of a project in terms of further defining the determined.		
1	Site	The impact will only affect the site
2	Local/district	Will affect the local area or district
3	Province/region	Will affect the entire province or region
4	International and National	Will affect the entire country

PROBABILITY		
This describes the chance of occurrence of an impact		
1	Unlikely	The chance of the impact occurring is extremely low (Less than a 25% chance of occurrence).
2	Possible	The impact may occur (Between a 25% to 50% chance of occurrence).
3	Probable	The impact will likely occur (Between a 50% to 75% chance of occurrence).
4	Definite	Impact will certainly occur (Greater than a 75% chance of occurrence).
REVERSIBILITY		
This describes the degree to which an impact on an environmental parameter can be successfully reversed upon completion of the proposed activity.		
1	Completely reversible	The impact is reversible with implementation of minor mitigation measures
2	Partly reversible	The impact is partly reversible, but more intense mitigation measures are required.
3	Barely reversible	The impact is unlikely to be reversed even with intense mitigation measures.
4	Irreversible	The impact is irreversible and no mitigation measures exist.
IRREPLACEABLE LOSS OF RESOURCES		
This describes the degree to which resources will be irreplaceably lost as a result of a proposed activity.		
1	No loss of resource.	The impact will not result in the loss of any resources.
2	Marginal loss of resource	The impact will result in marginal loss of resources.
3	Significant loss of resources	The impact will result in significant loss of resources.
4	Complete loss of resources	The impact is result in a complete loss of all resources.
DURATION		
This describes the duration of the impacts on the environmental parameter. Duration indicates the lifetime of the impact as a result of the proposed activity		
1	Short term	The impact and its effects will either disappear with mitigation or will be mitigated through natural process in a span shorter than the construction phase (0 – 1 years), or the impact and its effects will last for the period of a relatively short construction period and a limited recovery time after construction, thereafter it will be entirely negated (0 – 2 years).
2	Medium term	The impact and its effects will continue or last for some time after the construction phase but will be mitigated by direct human action or by natural processes thereafter (2 – 10 years).

3	Long term	The impact and its effects will continue or last for the entire operational life of the development but will be mitigated by direct human action or by natural processes thereafter (10 – 50 years).
4	Permanent	The only class of impact that will be non-transitory. Mitigation either by man or natural process will not occur in such a way or such a time span that the impact can be considered transient (Indefinite).
CUMULATIVE EFFECT		
This describes the cumulative effect of the impacts on the environmental parameter. A cumulative effect/impact is an effect which in itself may not be significant but may become significant if added to other existing or potential impacts emanating from other similar or diverse activities as a result of the project activity in question.		
1	Negligible Cumulative Impact	The impact would result in negligible to no cumulative effects
2	Low Cumulative Impact	The impact would result in insignificant cumulative effects
3	Medium Cumulative impact	The impact would result in minor cumulative effects
4	High Cumulative Impact	The impact would result in significant cumulative effects
INTENSITY/ MAGNITUDE		
Describes the severity of an impact		
1	Low	Impact affects the quality, use and integrity of the system/component in a way that is barely perceptible.
2	Medium	Impact alters the quality, use and integrity of the system/component but system/ component continues to function in a moderately modified way and maintains general integrity (some impact on integrity).
3	High	Impact affects the continued viability of the system/ component, and the quality, use, integrity and functionality of the system or component is severely impaired and may temporarily cease. High costs of rehabilitation and remediation.
4	Very high	Impact affects the continued viability of the system/component, and the quality, use, integrity and functionality of the system or component permanently ceases and is irreversibly impaired (system collapse). Rehabilitation and remediation often impossible. If possible, rehabilitation and remediation often unfeasible due to extremely high costs of rehabilitation and remediation.
SIGNIFICANCE		

Significance is determined through a synthesis of impact characteristics. Significance is an indication of the importance of the impact in terms of both physical extent and time scale and therefore indicates the level of mitigation required. This describes the significance of the impact on the environmental parameter. The calculation of the significance of an impact uses the following formula:

(Extent + probability + reversibility + irreplaceability + duration + cumulative effect) x magnitude/intensity.

The summation of the different criteria will produce a non-weighted value. By multiplying this value with the magnitude/intensity, the resultant value acquires a weighted characteristic which can be measured and assigned a significance rating.

Points	Impact Significance Rating	Description
6 to 28	Negative Low impact	The anticipated impact will have negligible negative effects and will require little to no mitigation.
6 to 28	Positive Low impact	The anticipated impact will have minor positive effects.
29 to 50	Negative Medium impact	The anticipated impact will have moderate negative effects and will require moderate mitigation measures.
29 to 50	Positive Medium impact	The anticipated impact will have moderate positive effects.
51 to 73	Negative High impact	The anticipated impact will have significant effects and will require significant mitigation measures to achieve an acceptable level of impact.
51 to 73	Positive High impact	The anticipated impact will have significant positive effects.
74 to 96	Negative very high impact	The anticipated impact will have highly significant effects and are unlikely to be able to be mitigated adequately. These impacts could be considered "fatal flaws".
74 to 96	Positive Very high impact	The anticipated impact will have highly significant positive effects.

3 ENVIRONMENTAL IMPACT ASSESSMENT PHASE

The EIA process will be undertaken as set out in the EIA Regulations, 2014, as amended. The sections that follow will describe the purpose and procedure behind each phase.

3.1 Purpose

The Environmental Impact Assessment procedures set out by the EIA Regulations, 2014, as amended will be followed in carrying out the application process with the relevant authorities. The following are the terms of reference for the completion of the EIA study and the purpose thereof:

- To facilitate authorization of the project in terms of the Environmental Impact Assessment Regulations of 2021 as amended.
- Conduct consultation with the Authorities, Interested and Affected Parties through a social facilitation process.
- Find mechanisms for addressing in more detail issues raised during the Public Participation Process.
- Evaluate concerns and priorities, important and detrimental issues which need to be addressed.
- Address issues that were raised during the Scoping Phase.
- Assess alternatives to the proposed activity in a comparative manner.
- Assess all identified impacts and determine the significance of each impact.
- Develop an EMPr with associated mitigation measures, and
- To evaluate the suitability of the site for the proposed works.

3.2 Proposed Approach and Methodology

The below provides a schematic representation of the application procedure followed in order to obtain authorisation to commence with a listed activity.

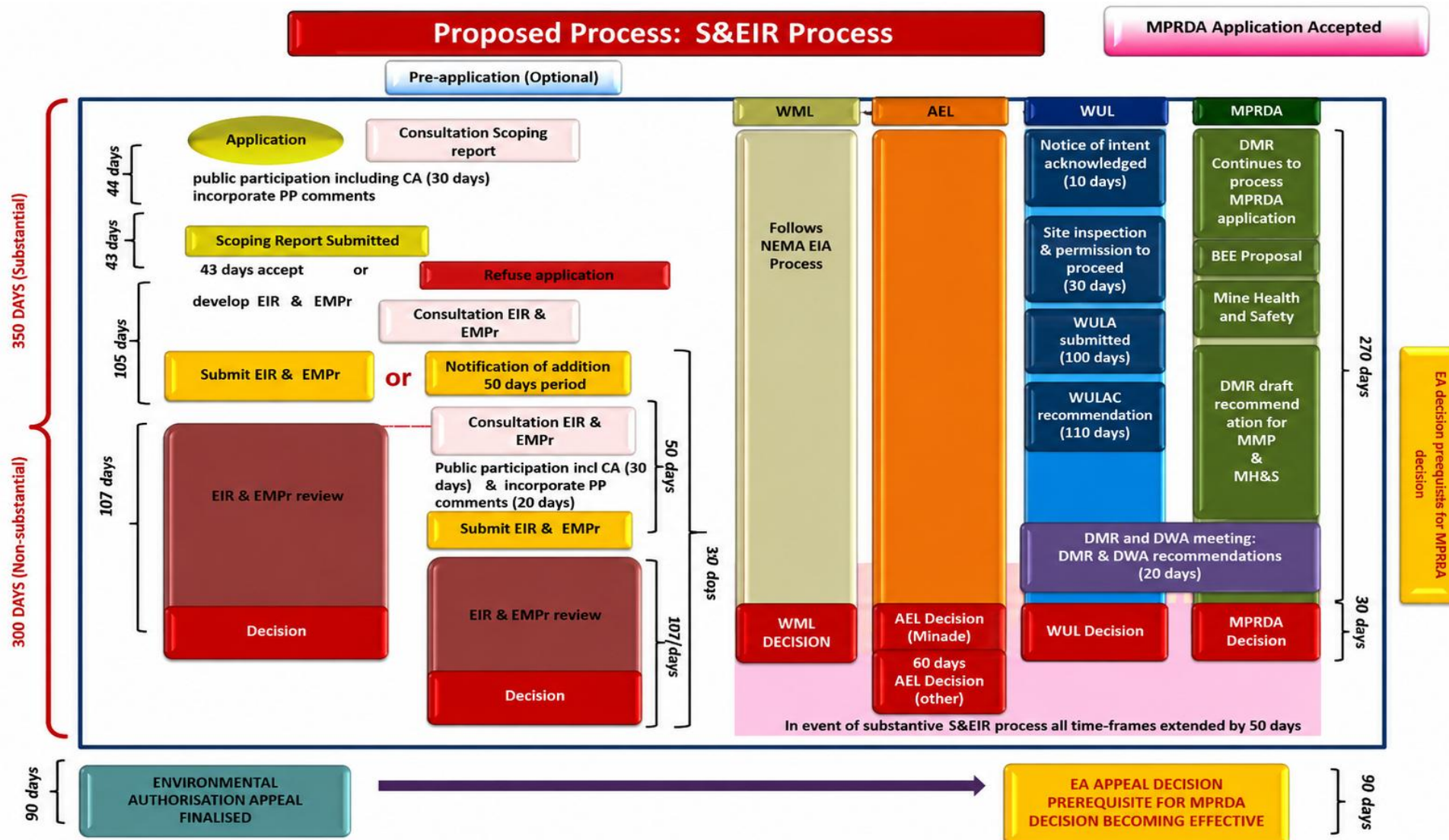


Figure 1: Scoping and Environmental Impact Assessment Process

The following tasks are proposed to be undertaken during the Scoping and EIR Phase:

Phase 1: Scoping

- Generate a screening tool to identify sensitivities of the study area.
- Request Pre-Application Meeting with DFFE.
- Create I&AP Database.
- Conduct 30 days PPP on Scoping Report.
- Compile Reports (Plan of Study, Draft Scoping Report).
- Printing and submission hardcopies and soft copies of Scoping to DFFE, and I&APs for public review, and to client and Associates.
- Respond to each comment received.
- Incorporate all issues and impacts raised during the Scoping phase to be included in the impact phase
- Update the Scoping Report based on all comments received during Public Participation.
- Compilation of the Terms of Reference for additional specialist input for the EIA phase specialist reports required / addendums to previous impact reports.
- Management of the appointment of the specialists and input
- Review of specialist assessments and provide detailed comments for amendment (if required).
- Co-ordination of various specialists' input to produce sensitivity maps and site layouts for inclusion in the Scoping Report.
- Submit Final Scoping Report and Plan of Study for approval to DFFE.

Phase 2: EIR and EMP

- Upon acceptance of Scoping report and plan of study;
- Conduct 30 days PP on the EIA Report.
- Compile EIA Report and EMP Report.
- Update I&AP Database.
- Printing and submission of hardcopies and soft copies to DFFE, I&APs for public review and to the client.
- Respond to each comment received.
- Update EIA Report and EMP based on all comments received during Public Participation.
- Compilation of the Terms of Reference for additional specialist input for the EIA phase specialist reports required/ addendums to previous impact reports.
- Review of specialist assessments and provide detailed comments for amendment (if required).
- Project management meetings with applicant and specialists.
- Additional site visits with specialists, authorities and I& APs.
- Submit the final EIA Report and EMP Report

4 PUBLIC PARTICIPATION PROCESS

The extensive database of stakeholders developed during the scoping process will be used as a basis to ensure that those stakeholders involved in the Scoping Phase also participate in the EIA phase. The database will also be expanded to include I&APs that wish to be involved in the process. Registered I&APs will be informed of the availability of the Draft EIA Report for review and will be given 30 days to

provide their comment. Two native languages, Afrikaans and Sepedi, will be translated from English and incorporated into all public participation documents to be circulated within the Project Area of Influence (POIA), ensuring that information is accessible to a broader range of Interested and Affected Parties (I&APs).

The comments received during the 30-day review period of the Draft Scoping and Draft EIA Reports will be incorporated into an updated Comments & Response Report. Further public consultation will take place in the form of Public Meetings and Focus Group Meetings as appropriate. The outcome of the proposed PPP will reveal whether or not further public meetings are required. The purpose of the Public Meetings would be to present the findings of the Draft Scoping and Draft EIA Reports and to present the alternative sites to the relevant stakeholders, registered I&APs and the affected landowners.

Selahle Consultancy & Projects (Pty) Ltd will use this forum to provide more background information about the proposed development including the specialist input, and also to provide the stakeholders with the opportunity to further comment on the proposed development. In the event that the comments reveal information that changes or influences the impact evaluation provided in the Draft Scoping and Draft EIA, the necessary amendments will be made to the report. The Final EIA Report will be submitted to the relevant Authorities, subsequent to the second phase of public consultation and simultaneously made available for public review.

4.1 Advertising

The development and associated Environmental Assessment process will be widely announced, with an invitation to the general public to register as I&APs and to actively participate in the PPP.

This will be achieved via the following:

- Notification letters will be sent out to all I&APs captured on the database
- Print media advertisement in the Local and/or regional newspaper
- An advertisement will be placed in English in at least one local newspaper, at the commencement of the 30-day comment period for the Draft EIA Report. A copy of the content of the advertisement will be included as an Appendix in the Draft EIA Report, along with proof of placement included in the Final EIA Report.
- The background information document (BID) covering a simplified rationale for and description of the development proposal, a description of the environmental assessment process, including public involvement and, importantly, a milestone where stakeholder input is critical and lastly an invitation to I&APs to participate, especially to attend public meetings.

4.2 Interaction with the Competent Authority

Interaction with DFFE and the other stakeholders will be undertaken during the Scoping Phase and will continue into the EIA Phase of the project. Further interaction will occur in the following manner:

- Submission of the Draft Scoping Report.
- A consultation meeting with various stakeholders as appropriate, to discuss the findings of the draft Scoping Report and the issues identified for consideration in the Draft EIA.
- Attendance of meetings if requested and

- Submission of the Draft report, following a public review period.

4.3 Developing a Strategy and Resolving Key Issues

A strategy for addressing and resolving key issues is to be developed and will include:

- Details on all assessments and investigations carried out;
- Use of the Public Participation Meetings to present the findings of the reports and test the acceptability of priority issues and mitigations;
- Openly and honestly relating both positive and negative impacts of the proposed development during the Public Meetings; and
- Allowing the public to understand the consequences of the proposed development on the area.

5 SPECIALIST STUDIES

The specialists will outline their proposed methodology, assumptions and sources of information will also be clearly identified. The knowledge of local people should be incorporated into the study. The description of the study approach shall include a short discussion of the appropriateness of the methods used in the specialist study in terms of local and international trends with respect to the specific practice.

5.1 Terms of Reference and Methodology to be used by each Specialist

The specialist reports were compiled in line with the protocol requirements in accordance with the Procedures for the Assessment and Minimum Criteria for Reporting in identified Environmental Themes in terms of Sections 24(5)(a) and (h) and 44 of the National Environmental Management Act, 1998, when applying for Environmental Authorisation, which were promulgated in Government Notice No. 320 of 20 March 2020 (i.e. “the Protocols”) and in Government Notice No. 1150 of 30 October 2020 (i.e. protocols for terrestrial plant and animal species) and Appendix 6 of the EIA Regulations, 2014, as amended. The findings and recommendations from the specialists are included in this report and the EMPr.

Below is a list of Specialist Studies that are involved in this application:

Table 5: List of Specialist Studies to be Undertaken

Specialist Assessment	Name of Specialist	Professional Affiliated Bodies	Organisation undertaking the assessment
Terrestrial Biodiversity (Flora and Fauna)	Musatondwa Magala	SACNASP (100111/15)	Eco-Sentle (Pty) Ltd
Aquatic/Wetland Assessment	Charlie-Bruce de Kock	SACNASP (145121)	The Biodiversity Company
Geotechnical Investigation	Khwathisani Mushiana	SACNASP (137295) NHBRC- 4000006225	Geo Equilibria
Climate Change	Andrew Husted	(SACNASP 400213/11)	The Biodiversity Company
Socio-Economic	Khumbelo Marabe	SACNASP (132731)	KMG Environmental Solution Services

Specialist Assessment	Name of Specialist	Professional Affiliated Bodies	Organisation undertaking the assessment
Avifauna	Lindi Steyn	(SACNASP 119992)	The Biodiversity Company
Visual Impact Assessment	Kathrin Hammel	SACLAP (20162)	Outline Escape Architects
Air Quality	Khumbelo Marabe	SACNASP (132731)	KMG Environmental Solution Services
Agricultural	Khumbelo Marabe	SACNASP (132731)	KMG Environmental Solution Services
Archaeological and Cultural Heritage Impact Assessment	Munyadziwa Magoma	ASAA (313)	Vhubvo Archaeo-Heritage Consultants cc
Palaeontology Impact Assessment	Munyadziwa Magoma	ASAA (313)	Vhubvo Archaeo-Heritage Consultants cc
Hydrology Assessment	Khwathisani Mushiana	SACNASP (137295) NHBRC- 4000006225	Geo Equilibria
Noise Impact Assessment	Khumbelo Marabe	SACNASP (132731)	KMG Environmental Solution Services
Civil Aviation			
Traffic Impact Study	Jacobus Leendert Botha	ECSA (Pr Tech Eng 200870051)	Route 2 - Transport Strategies Cc

Below is an outline of the Terms of Reference (ToR) and methodology for each specialist assessment that will be undertaken as part of the EIA phase. This will ensure that all identified alternatives are assessed using a standardised ranking methodology. Each specialist must provide recommendations for the preferred site and route.

5.1.1 Agricultural Impact Assessment

The primary purpose of the Agricultural Impact Assessment is to evaluate the agricultural potential, soil characteristics, and land capability of the proposed WFGD Alternative Disposal Sites located within the broader Medupi study area. The assessment aims to:

- Identify and characterise soil forms, textures, structure, and drainage classes within each site;
- Determine the land-capability classes (arable and non-arable) in accordance with CARA (Act 43 of 1983) and DALRRD guidelines;
- Assess agricultural sensitivity and the potential loss of productive land associated with the development;
- Provide mitigation and rehabilitation measures to ensure long-term conservation of soil resources; and
- Supply scientifically defensible inputs to the Environmental Impact Report (EIR) and Environmental Management Programme (EMPr) to support Eskom's environmental authorisation process.

5.1.2 Landscape/Visual Impact Assessment

Methodology for Visual Impact Assessment to include:

1. Define Study Area - Site visit to the proposed site to assess first-hand the proposed development structures and their location.
2. Description of the receiving environment and the proposed project including:
 - Landscape character (natural vs industrial context).
 - Topography and vegetation (screening potential).
 - Existing visual intrusions (power plants, transmission lines, etc.)
3. Establishment of the view catchment area, view corridors, viewpoints, and receptors.
 - Use site photos, GIS mapping, and viewpoint selection.
 - Sensitivity (e.g., homes vs industrial zones).
 - Viewer numbers (busy roads vs remote areas).
4. Assess Visual Sensitivity and evaluate receptors based on:
 - Viewer type (residents = high sensitivity, industrial = lower).
 - Viewing duration (long-term vs transient).
 - Value of view (scenic, cultural, or ordinary).
5. Indication of potential visual impacts using established criteria.
 - Combine sensitivity + magnitude using a matrix.

5.1.3 Archaeological and Cultural Heritage Impact Assessment

The study method refers to the SAHRA Policy Guidelines for impact assessment, 2012. As part of this impact assessment, the following process will be followed:

- Literature Review: To understand the background of the area, a background study was undertaken, and relevant institutions were consulted. These studies entail review of archaeological and heritage impact assessment studies that have been conducted around the proposed area thorough SAHRIS. In addition, E-journal platforms such as J-stor, Google Scholar and History Resource Centre were searched;
- Oral Interview: The determination of heritage values relies mostly on direct consultation with individuals in the community. Individuals with knowledge of heritage resources (graves) in the study area were contacted. Consultation was designed to elicit information which may facilitate understanding of heritage values and identification of character-defining elements on the site; and
- The final step involved the recording and documentation of relevant heritage resources, as well as the assessment of resources in terms of the heritage impact assessment criteria and report writing, mapping and constructive recommendations.

Note must be taken that, as aforesaid, the findings of this study have been informed by a desktop study and field survey. The desktop study was undertaken through SAHRIS for previous Heritage Impact Assessments and Archaeological Impact Assessments conducted in the region of the proposed development, and for research that has been carried out in the wider area over the past years. In

addition, a historical background search was also done. Analysis of these studies predicted that archaeological sites, cultural heritage sites, historic structures, (isolated) artefacts, historical mining and burial grounds (especially dating to the historical era) were likely to be present on the affected landscape. The field survey was conducted to test this hypothesis and verify this forecast within the area proposed for development.

5.1.4 Palaeontology Impact Assessment

The Terms of Reference (ToR) for this study will entail undertaking a PIA and providing feasible management measures to comply with the requirements of SAHRA.

The methods that will be employed to address the ToR will include;

- Consultation of geological maps, literature, palaeontological databases, published and unpublished records to determine the likelihood of fossils occurring in the affected areas. Sources include records housed at the Evolutionary Studies Institute at the University of the Witwatersrand and SAHRA databases; e.g., <https://sahris.sahra.org.za/map/palaeo>
- Where necessary, site visits by a qualified palaeontologist to locate any fossils and assess their importance (*not applicable to this assessment*);
- Where appropriate, collection of unique or rare fossils with the necessary permits for storage and curation at an appropriate facility (*not applicable to this assessment*); and
- Determination of fossils' representativity or scientific importance to decide if the fossils can be destroyed or a representative sample collected (*not applicable to this assessment*).

5.1.5 Terrestrial Biodiversity (Flora & Fauna) Impact Assessment

The Terms of Reference for this Scoping Phase terrestrial biodiversity assessment include, but are not limited to, the following tasks:

- Review and summarise relevant ecological, conservation, and biodiversity information from available databases, spatial datasets (e.g., national and provincial biodiversity plans, SANBI, and screening tools), and published literature;
- Describe and characterise the terrestrial biodiversity and ecological features of the proposed project area and its alternatives, focusing on:
 - Dominant vegetation types and their current condition;
 - Threatened ecosystems and locally significant habitat types;
 - Ecological connectivity, habitat fragmentation, and key ecological processes (e.g., drainage patterns, slope, species movement corridors); and
 - Occurrence and potential presence of Species of Conservation Concern (SCCs) and their critical habitats (e.g., feeding, nesting, or breeding areas).
- Undertake a reconnaissance-level field survey to verify and ground-truth habitat conditions, ecosystem types, and biodiversity features identified through desktop analysis;
- Identify and map sensitive biodiversity features that may influence the selection and design of preferred disposal site alternatives.

5.1.6 Avifauna Impact Assessment

The scope of the Avifaunal Impact Assessment will include the following:

- Desktop assessment to identify the relevant ecologically important geographical features within the Project Area of Influence (PAOI) and surrounding landscape;

- Desktop assessment to compile an expected species list and possible avifauna Species of Conservation Concern (SCC) that potentially occur within the PAOI;
- Fieldwork to determine the density and composition of species in the PAOI;
- Description of the baseline avifauna species and Functional Feeding Guild (FFG) composition assemblage within the PAOI;
- Delineate site sensitivity or sensitivities, i.e., the Site Ecological Importance (SEI) within the context of the avifauna species assemblage of the PAOI;
- Identify the manner that the proposed development impacts the avifauna community and evaluate the level of risk of these potential impacts; and
- Provide mitigation measures to prevent or reduce the possible impacts.

5.1.7 Aquatic Biodiversity Impact Assessment

The following tasks will be completed in fulfilment of the terms of reference for a wetland/aquatic assessment:

- A desktop assessment of available and related datasets to provide context of the freshwater biodiversity of the project area and to indicate potential wetland areas;
- The delineation, classification and assessment of wetlands within 500 m of the project area;
- An assessment of the related impacts using the Risk Assessment (DWS, 2023);
- The provision of recommendations relevant to associated impacts; and
- Report compilation detailing the baseline findings.

5.1.8 Hydrology/Geohydrology Assessment

Desktop Assessment

The assessment was initiated with a desktop study to gather hydrological, catchment description reviews and analysis of various sources of rainfall and evaporation data. The section also presents the baseline hydrology of the site and surroundings including topography, watercourse network and catchment delineation. The catchment attributes namely Mean Annual Runoff, Mean Annual Precipitation and Mean Annual Evaporation were obtained from the Water Research Commission (WRC, 2012). In addition, the hydrological data was reviewed and assessed for relevance, to characterise the site, identify water features, and for hydrological characterisation.

Site Assessment and Hydrocensus

A site visit was conducted to gain a better understanding of the dominant hydrogeological processes at the site, as well as to gather data for hydrogeological assessments. Existing water resources that could be affected by the proposed project were identified, hydrogeological linkages with other water resources and existing users of surface water resources in the area were noted. A search of the National Groundwater Archive (NGA), which provides data on borehole positions, groundwater chemistry and yield, when available, was carried out to identify other boreholes within the site vicinity.

A hydrocensus was carried out on the 16th and 17th April 2026 within the project area as well as the adjacent areas to identify groundwater users, groundwater potential and quality. Where possible, groundwater levels were also measured to assist in the understanding of groundwater flow within the project area.

Hydrogeological Assessment and Reporting

This stage involved the compilation of this report presents a qualitative assessment of the impacts of the project on the baseline surface water environment, a range of mitigation measures to minimize impacts, and recommendation on monitoring; and conclusions which presents a summary of the main conclusions and recommendations of this report.

5.1.9 Traffic Impact Assessment

The scope of work and status of the Site Traffic Assessment is as follows:

- Traffic Surveys at affected intersections.
- Desktop study and site inspections.
- Investigation into existing and future road network planning
- Preparation of volume figures. Trip generation calculations. Trip assignment allocation and forecasting. Current.
- Design vehicle simulation. Design vehicle specifications must be provided.
- Internal site simulation information must be provided. Information such as GLA of office space, parking provision and internal traffic accommodation must be provided.
- Access to the development must be allocated and dimension specified. Simulation must be done.
- Analysis of traffic data must be done in line with 3 and 4 above.
- Section in report regarding Environmental Impacts.
- Conclusions and recommendations will be provided.

5.1.10 Geotechnical Investigation Assessment

Desktop Study

Desk study included a study of published geological and topographic maps, aerial photographs, ortho-photographs, geo-hydrological maps, or any other relevant data from previous work on and around the site. The purpose of the desk study was to:

- Provide background information and technical guidance as well as refining the scope of work for the follow-up geotechnical assessment; and
- Identify potential geotechnical significant features such as tension cracks, slope failures and bulging of faces to be confirmed during site walkover.

Geotechnical Investigation

A geotechnical investigation was conducted, during which significant geotechnical features across the site such as potential seepage zones, tension cracks and bulging of faces were recorded. This phase of investigation relied on intrusive investigation methods such as test pitting, in-situ testing to collect and provide interpretive information to make recommendations regarding foundation and structural design.

The geotechnical investigation was carried out on the 16th of April 2026, which involved the excavation of test pits using a TLB from the ground surface to maximum depths of around 3.0 m below ground level or machine refusal.

The test pits were positioned on various sections of the area under investigation considering the anticipated ground conditions, existing land use and the proposed development. The test pits positions

were recorded in the field using a handheld Global Positioning System (GPS) with an accuracy of 3 m, and their coordinates appear on the soil profile log that will be included in Appendix A of the report. The test pits were profiled by a geologist according to standard practice to define ground conditions and groundwater occurrences within the zone of influence of foundation work.

Laboratory Testing

Laboratory testing forms an essential part of geotechnical investigation. Representative disturbed samples were randomly retrieved from soil horizons for examination, identification, and laboratory testing. The laboratory test results are discussed in Section 7 of the report.

5.1.11 Climate Impact Assessment

The principal aim of a climate change assessment is to identify baseline risk and vulnerabilities at a regional scale for the project area. This will be achieved through the following:

- A desktop assessment of existing data to inform on the region encompassing the project area;
- Describe the past and current climatically important features to develop a baseline understanding of relevant risk;
- Identify climate change impacts associated with the region encompassing the project area;
- Describe the exposure and severity associated with societal and ecological vulnerabilities;
- Identify priority climate change concerns;
- Recommend risk reduction measures based on existing data.
- This report, after taking into consideration the findings and recommendations provided by the specialist herein, should inform and guide the Environmental Assessment Practitioner (EAP) and regulatory authorities, enabling informed decision-making concerning the viability of the proposed development and related activities in the face of climate change.

5.1.12 Socio-Economic Assessment

The purpose of SEIA is to determine the potential social and economic impacts of the proposed WFGD disposal facility on the surrounding communities and the regional economy, and to recommend appropriate mitigation and enhancement measures where required. The specific objectives are to:

- Establish an independent socio-economic baseline describing current demographic trends, livelihoods, employment, income distribution, service provision, education, and health conditions in the project area.
- Assess direct, indirect, and cumulative social and economic impacts expected during construction, operation, and closure phases.
- Evaluate potential changes in employment patterns, business activity, population movement, service demand, and community well-being.
- Identify vulnerable or marginalised groups who may be disproportionately affected and propose measures to enhance inclusivity and resilience.
- Formulate a Social Management Plan (SMP) with measurable indicators for monitoring, reporting, and adaptive management throughout the project life cycle.
- The SEIA is conducted as an independent, stand-alone analysis in accordance with applicable national guidelines and does not rely on findings from other specialist disciplines in determining its conclusions.

5.1.13 Ambient Air Quality Impact Assessment

Scope

- Review of WFGD process emissions and waste disposal activities
- Identification of emission sources (construction & operational phases)
- Dust and fugitive emission assessment (gypsum handling, sludge drying, haul roads)
- Dispersion modelling (AERMOD)
- Assessment of National Ambient Air Quality Standards (NAAQS)
- Assessment of cumulative impacts with existing Medupi operations
- Mitigation and monitoring recommendations
- Input into EMPr

5.1.14 Ambient Noise Impact Assessment

Overall Approach

The Noise Impact Assessment follows a systematic process that integrates desktop analysis, field measurements, predictive modelling, and impact evaluation. This ensures that both existing and future noise environments are accurately characterised and assessed.

Desktop Study

A detailed desktop review is undertaken to gather and analyse available information relevant to the study area. This includes reviewing the proposed project layout, identifying potential noise-generating activities, and mapping surrounding land uses. Noise-sensitive receptors are identified during this phase and typically include residential areas, schools, healthcare facilities, places of worship, and commercial or industrial areas. Additional data reviewed includes topography, meteorological conditions obtained from the South African Weather Service, and any previous environmental or specialist studies relevant to the site.

Site Visit and Field Verification

A site inspection is conducted to validate desktop findings and obtain site-specific information. During the visit, surrounding land uses and receptor locations are confirmed, and dominant noise sources are identified. Suitable locations for noise monitoring are selected based on accessibility, representativeness, and proximity to sensitive receptors. GPS coordinates are recorded, and photographic documentation is collected to support the assessment. Site characteristics such as terrain, vegetation, and existing barriers are also noted, as these influence noise propagations.

Baseline Noise Monitoring

Baseline noise measurements are undertaken to establish the existing acoustic environment. Monitoring is conducted using calibrated Class 1 sound level meters compliant with international standards, with calibration performed before and after measurements. Noise parameters measured include the equivalent continuous sound level (LAeq), maximum sound level (Lmax), minimum sound level (Lmin), and background noise level (LA90). These parameters provide a comprehensive representation of the acoustic environment. Measurements are conducted during both daytime (06:00 to 22:00) and nighttime (22:00 to 06:00) periods to capture temporal variations in noise levels. Sampling durations typically range between five and fifteen minutes per location, depending on site conditions. Monitoring locations include both Noise Measurement Points and Noise Sensitive Receptors to ensure

representative coverage of the study area. All measurements are conducted in accordance with SANS 10117 and interpreted using SANS 10103 guidelines.

Noise Modelling and Prediction

Predictive noise modelling is undertaken to estimate future noise levels associated with the proposed development during both construction and operational phases. The modelling is conducted in accordance with SANS 10210 and incorporates key input parameters such as source noise levels, distances to receptors, terrain features, atmospheric conditions, and the presence of barriers or structures. Different scenarios are modelled to assess potential impacts, including construction activities, operational activities, and cumulative impacts where applicable. Outputs from the modelling include predicted noise levels at sensitive receptors and spatial representations such as noise contour maps illustrating the distribution of sound levels across the study area.

Impact Assessment

The assessment of noise impacts is undertaken using established environmental impact assessment criteria. These include the magnitude of the impact, duration, extent, frequency, probability of occurrence, and reversibility. Predicted and measured noise levels are compared against acceptable limits provided in SANS 10103 and the Limpopo Noise Control Regulations to determine compliance. The significance of impacts is evaluated both before and after the implementation of mitigation measures, allowing for the identification of residual impacts.

5.1.15 Dispersion Modelling Study

The modelling assessment will include:

Baseline Air Quality Review

- Review of regional air quality data
- Identification of sensitive receptors (communities, farms, schools, ecological areas)
- Review of background pollutant concentrations

Emission Source Identification

- Identification of all emission sources (e.g., drilling, vehicle movement, material handling, stockpiles)
- Estimation of emission rates (PM10, PM2.5, TSP, NO2 where applicable)
- Determination of operational scenarios

Meteorological Data Analysis

- Acquisition of site-specific or nearest representative meteorological data
- Wind rose analysis
- Stability class determination
- Temperature and rainfall analysis

Dispersion Modelling

- Use of approved atmospheric dispersion modelling software (e.g., AERMOD or CALPUFF where applicable)
- Simulation of worst-case operational scenarios
- Modelling of short-term and long-term concentrations

- Cumulative impact assessment where relevant

Impact Assessment

- Comparison of predicted concentrations against:
- National Ambient Air Quality Standards (NAAQS)
- WHO Guidelines (if applicable)
- Identification of exceedances
- Risk classification (low, moderate, high significance)

Mitigation Measures

- Dust suppression strategies
- Operational control measures
- Monitoring recommendations
- Compliance management plan

6 REQUIREMENTS FOR A WASTE LICENSE REPORT

Scoping and Environmental Impact Assessment Report, which should include:

- Description of the environment that may be affected by the proposed activity and the way the geographical, physical, biological, social, economic and cultural aspects of the environment may be affected by the proposed activity
- Description of significant environmental impacts, including cumulative impacts, that may occur as a result of the undertaking of the activity
- Conducting public participation as outlined in EIA Regulations
- Operational plan
- Waste disposal facility designs
- End-use plan (only applies to site closure)
- Closure/Remedial designs (only apply to site closure)
- Latest external audit report (only applies to permit amendment)
- Application and report documents (four hard copies for all applications)
- A3 size layout plans (four hard copies for all applications)
- Landfill conceptual designs
- Geo-hydrological report (only applies to landfill sites, storage and treatment of waste)
- Consideration of alternatives
- Description of mitigation measures and risk assessment
- Any inputs made by specialists to the extent that may be necessary
- Any specific information as may be required by the competent authority
- Plan of study for environmental impact assessment, which must, among others, include Description of the tasks to be undertaken as part of the environmental impact assessment process, including specialist report or specialised processes, and a manner in which such tasks will be undertaken
- An indication of the stages at which the competent authority will be consulted
- Description of methods for assessing issues and alternatives, including the no-go alternative
- Particulars of the participation process that will be conducted during the EIA process

The compilation of the EIA report will be based on tasks outlined in the Plan of Study for EIA, and the following reports must also be attached.

- Draft environmental management plan (only applies to EIA reports.)
- Copies of any specialist reports and specialised processes (only apply to EIA reports. No copies of specialist studies and specialised processes should be included in the scoping report)

7 EIA REPORT REQUIREMENTS

The EIA Report will be in accordance with Appendix 3 of the EIA Regulations, 2014 as amended.

The following critical components of the EIA Report are highlighted:

- A description of the policy and legislative context;
- A detailed description of the proposed development (full scope of activities);
- A detailed description of the proposed development site, which will include a plan that locates the proposed activities applied for as well as the associated structures and infrastructure;
- A description of the environment that may be affected by the activity and the manner in which physical, biological, social, economic and cultural aspects of the environment may be affected by the proposed development;
- The methodology of the stakeholder engagement process;
- The Comments and Responses Report and I&APs Database will be appended to the EIA Report;
- A description of the need and desirability of the proposed development and the identified potential alternatives to the proposed activity;
- A summary of the methodology used in determining the significance of potential impacts;
- A description and comparative assessment of the project alternatives;
- A summary of the findings of the specialist studies;
- A detailed assessment of all identified potential impacts;
- A list of the assumptions, uncertainties and gaps in knowledge;
- An Environmental Impact Statement;
- Any aspects which were conditional to the findings of the assessment either by the EAP or specialists which are to be included as conditions of authorisation;
- A reasoned opinion as to whether the proposed activity should or should not be authorised, and if the opinion is that it should be authorised, any conditions that should be made in respect of that authorisation;
- An EMP that complies with Appendix 4 of the EIA Regulations;
- Copies of all specialist reports will be appended to the EIA Report; and
- Any further information that will assist DFFE during decision-making

8 TASKS TO BE UNDERTAKEN AS PART OF THE EIA

Table 6: Proposed Programme

Task	Anticipated Date
Final Scoping Report submission	July 2026
Undertake Specialist Studies	August 2026
Draft EIR and EMP	October 2026
Stakeholder Engagement on EIR / EMP	August – November 2026
Finalise EIR and EMP	November 2026

Task	Anticipated Date
Submission to Relevant Authorities	December 2026
Decision Making by CA	May 2027
Appeal Period	May 2027

9 MITIGATION OF IMPACTS

During the EIA Phase, a detailed assessment will be conducted to evaluate potentially significant impacts, with input from the identified impacts, including those from the specialist assessments and I&APs. This will be done using the impact assessment methodology outlined in Section 11.7 above. Suitable mitigation measures will be identified, including those from specialists to manage the environmental impacts according to the following hierarchy:

- The prevention of certain impacts will be investigated during the EIA phases. These could include the prevention of the occurrence through the installation of leak detection systems, lining for the disposal sites, avoiding sensitive areas, and heritage sites.
- If prevention is not possible, the following step in the mitigation hierarchy will involve the reduction or minimisation of such impacts to acceptable levels.
- The rehabilitation of the affected attribute will take place if the impacts cannot be minimised.

As a last resort, an offset may be required as a form of mitigating the impacts that could not be mitigated by the first three mitigation steps above. This includes implementing an intervention that has the purpose of counterbalancing the residual negative impacts of an activity, or activities, on biodiversity, through increased protection and appropriate management, after every effort has been made to avoid and minimise impacts, and rehabilitate affected areas. The proposed areas and routes lie within an Ecological Support Area, hence there might not be a need for an offset depending on the layout design and outcome of the specialist assessments that will be undertaken as part of the EIA phase.

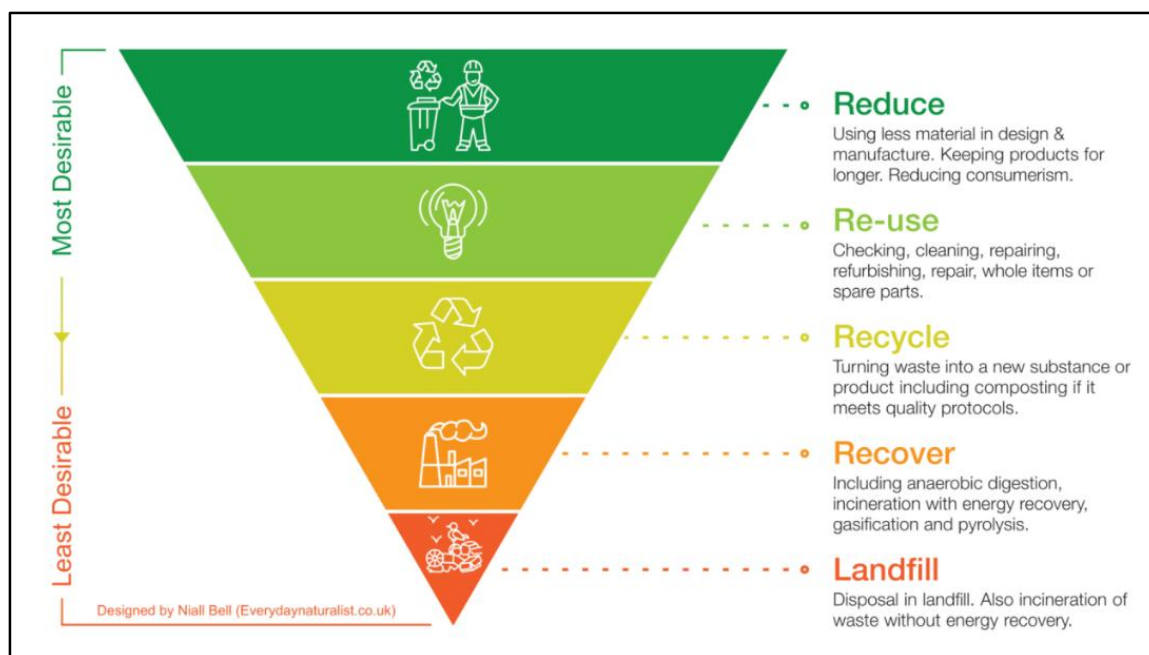


Figure 2: Waste Hierarchy

Although the proposed project is opting for the least desirable option in terms of the waste hierarchy (see Figure 13 above), most of the waste to be disposed of cannot be reused except for gypsum, which can be resold depending on the quality of the limestone that will be used during the WFGD process. The EMPr will outline the mitigation measures that will form part of the EIR.

The EMPr will be drafted in accordance with Appendix 4 of the EIA regulations, 2014, as amended

10 COLLATING AVAILABLE INFORMATION AND IDENTIFYING KNOWLEDGE GAPS

Site specific data will be gathered through detailed site investigations. Information on any previous studies in the area will be collated and all available information evaluated to determine gaps in the data. The following methodology will be used to acquire completed specialists' reports (previous studies) and site-specific information to assist in the compilation of the Environmental Impact Report.

- Identifying sensitive areas, which may require in-depth studies /assistance from relevant specialists.
- Collecting data such as published literature and maps from government departments, the Geological Survey, general literature searches, Institutions and websites.
- Carrying out a literature review to source information relevant to the project.
- Scheduling work sessions to fully integrate and pull the knowledge and relevant expertise for the project.

The available data will then be reviewed and assessed to determine where additional information is required for the study. The end product of this task is a summary and draft EIR. The draft EIR will be placed on public review before a final report is prepared for submission to the relevant authorities.

10.1 Public Input

Comments and concerns from all stakeholders, interested and affected parties will be gathered, assessed and incorporated into the EIR. Public meetings and information sessions are to be organised where all concerns will be discussed and sound conclusions reached. Upon completion of the draft EIR, the document is to be put out for public review for a period of 30 days. Further comments received will be addressed and incorporated into the final EIR that will be submitted to the authorities for decision making.

11 CONCLUSION AND WAY FORWARD

11.1 Conclusion

Local knowledge, professional experience and specialist knowledge of the area have all been used to identify the potential environmental issues associated with this development and the resultant potential environmental impacts. There is no guarantee that all the potential impacts arising from the proposed development have been identified within the Scoping Phase, however, the report provides an outline of the established measures that were taken to best identify all the potential impacts. The purpose of the Scoping Phase is not to assess and mitigate the potential environmental impacts and issues identified

but rather to scope them and determine which needs further investigation before an assessment can be undertaken.

The circulation of the Draft Scoping Report for public comment aims to afford the public an opportunity to review the outcomes of the Scoping process and identify additional possible issues that have not been identified. This will further enhance the rigor of the scoping process. The Plan of Study for EIA outlines the strategy to identify and assess all these potential impacts and concerns in the EIR Phase.

11.2 Way Forward

The Draft Scoping Report will be submitted to all I&APs for a 30-day comment period. All comments received from I&APs will be included in the CRR and included as an appendix to the Final Scoping Report.

Thereafter the Final Scoping, including the Plan of Study for EIA, will be submitted to the competent authority for review. Upon receipt of comment from the competent authority regarding the Final Scoping Report, the Terms of Reference for any further studies will be amended should it be required, and the studies initiated.

Following completion of the specialist studies and assessment of the impacts, a Draft EIR will be compiled and will follow a similar public participation procedure to that undertaken for the Scoping Phase, whereby opportunities for engagement will be provided through stakeholder meetings and dissemination of project information. I&APs will be allowed to review the Draft EIR before submission to the competent authority for decision-making.