

**BASIC ASSESSMENT PROCESS
FINAL BASIC ASSESSMENT REPORT**

**PROPOSED COAL STOCKYARD ON MEDUPI
ASH DUMP SITE, LIMPOPO PROVINCE**

DEA Ref. No: 14/12/16/3/3/1/531

FINAL BAR to DEA

Prepared for:

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environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

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File Reference Number:

Application Number:

Date Received:

Basic assessment report in terms of the Environmental Impact Assessment Regulations, 2010, promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended.

Kindly note that:

1. This **basic assessment report** is a standard report that may be required by a competent authority in terms of the EIA Regulations, 2010 and is meant to streamline applications. Please make sure that it is the report used by the particular competent authority for the activity that is being applied for.
2. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.
3. Where applicable **tick** the boxes that are applicable in the report.
4. An incomplete report may be returned to the applicant for revision.
5. The use of "not applicable" in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the rejection of the application as provided for in the regulations.
6. This report must be handed in at offices of the relevant competent authority as determined by each authority.
7. No faxed or e-mailed reports will be accepted.
8. The report must be compiled by an independent environmental assessment practitioner.
9. Unless protected by law, all information in the report will become public information on receipt by the competent authority. Any interested and affected party should be provided with the information contained in this report on request, during any stage of the application process.
10. A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed.

PROJECT DETAILS

DEA Reference No. : 14/12/16/3/3/1/531

Title : Basic Assessment Process
Final Basic Assessment Report: Proposed
Establishment of a coal stock yard on the ash dump
site at Medupi Power Station, Limpopo Province.

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Client : Eskom Holdings (SOC) Limited

Report Status : Final Basic Assessment Report to DEA

When used as a reference this report should be cited as: Savannah Environmental (2012) Draft Basic Assessment Report: The proposed coal stockyard on Medupi Ash Dump, Limpopo Province.

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Appendix A: Site Plan(s)

Appendix B: Photo Record

Appendix C: Facility Illustrations

» *Appendix C: Facility Illustration*

Appendix D: Specialist Reports (None)

Appendix E: Record of Public Involvement Process

» *Appendix E1: Proof of Adverts*

» *Appendix E2: Proof of Site Notice Placement*

» *Appendix E3: Summary and Fact Sheet and proof of distribution*

» *Appendix E4: I&AP Database and distribution of Draft BARs*

» *Appendix E5: Comments and Responses Report*

Appendix F: Draft Environmental Management Programme

Appendix G: Other Information

» Appendix G1: Savannah Environmental project team consultants CVs

» Appendix G2: Copy of the RoD: DEA Ref No 12/12/20/695; completed by Bohlweki Environmental in May 2006)

» Appendix G3: Department of Water Affairs - Water Licence

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- » Appendix G5: List of Fauna on Eenzaamheid Farm
- » Appendix G6: Air Emissions License
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SUMMARY AND OVERVIEW OF THE PROPOSED PROJECT

1. Background to the Project

Eskom Holdings (SOC) Limited's (Eskom) main objective is to provide energy and related services, including the generation, transmission, distribution and supply of electricity. In order to be able to adequately provide for the growing electricity demand, Eskom proposed to construct a new Medupi power station and associated infrastructure (including a coal stockpile) in the Lephalale area, in the vicinity of the existing Matimba Power Station. Medupi Power Station will have a maximum capacity of 4 800 Megawatts (MW) and will be coal-fired, with the coal being sourced from local coalfields.

An EIA was undertaken by Bohlweki Environmental in May 2006 for the proposed Medupi Power Station (DEA Ref No 12/12/20/695) and a Record of Decision was issued (September 2006) (refer to Appendix G2), granting authorisation for the construction of the following:

- The construction of a 4 800 MW coal-fired power station and ancillary infrastructure near Lephalale, on approximately 700ha of the farm Naauwontkome 509 LQ
- The re-routing of the Steenbokpan road
- The construction of the overland conveyor belt between the power station and the mine

In addition, a waste license for the establishment of an ash dump on the farm Eenzaamheid 687 LQ was received by Eskom Holdings Limited in October 2009 (Ref 12/9/11/L50/6).

The current stockyard is designed to accommodate coal during normal operations. Due to anticipated delays in the commissioning of the Medupi Power Station due to various factors, **Eskom** proposes to establish a coal stockyard to accommodate coal which is to be supplied to the power station from Exxaro's Grootegeuk Mine from May 2012. This coal stockyard would be able to accommodate the volume of coal provided during the period the power station is not in full commercial operation. The Farm Eenzaamheid 687 LQ has been identified as the preferred site for the coal stock yard. The Farm Eenzaamheid 687 LQ has been previously assessed within the EIA undertaken for the Medupi Power Station (DEA Ref No 12/12/20/695; completed by Bohlweki Environmental in May 2006), and the establishment of the ash dump associated with Medupi Power Station was authorised for this property.

Of the eight alternative farms assessed during the EIA (i.e. Appelvlakte 448 LQ, Nelsonskap 464 LQ, Naauwontkome 509 LQ, Droogeheuwel 447 LQ, Zongezien 467 LQ, Kuipersbult 511 LQ, and Kromdraai 690 LQ and Eenzaamheid 687 LQ), Eenzaamheid

687 LQ was selected as the preferred site for the location of the ash dump. The issues and potential impacts associated with development on the proposed development site are therefore known.

The following is relevant for this proposed development:

- » The coal stockyard is proposed to be established within the footprint of the already authorised ash dump (DEA Ref No 12/12/20/695 and waste license ref no 12/9/11/L50/6)
- » It is expected that approximately 38 million tonnes of coal would be stockpiled at this site up until 2028.
- » The area required for the stockyard is approximately 2.5 km x 2.5 km in extent.
- » Associated infrastructure would include coal conveyors between Grootegeluk Mine and the coal stockpile, as well as between the coal stockpile and Medupi Power Station. It is proposed that use be made of the already authorised conveyor systems with slight alterations. The conveyor system will cross the authorised ash dump, therefore any slight alteration impacts have already been taken into account in the previous Environmental Authorisation (DEA Ref No 12/12/20/695). There will be associated roads that will run alongside these coal conveyors. The impacts in this regard have already been identified and assessed within the EIA for the power station.
- » The proposed holding dams will collect Run off water to be recycled for ash dump operation

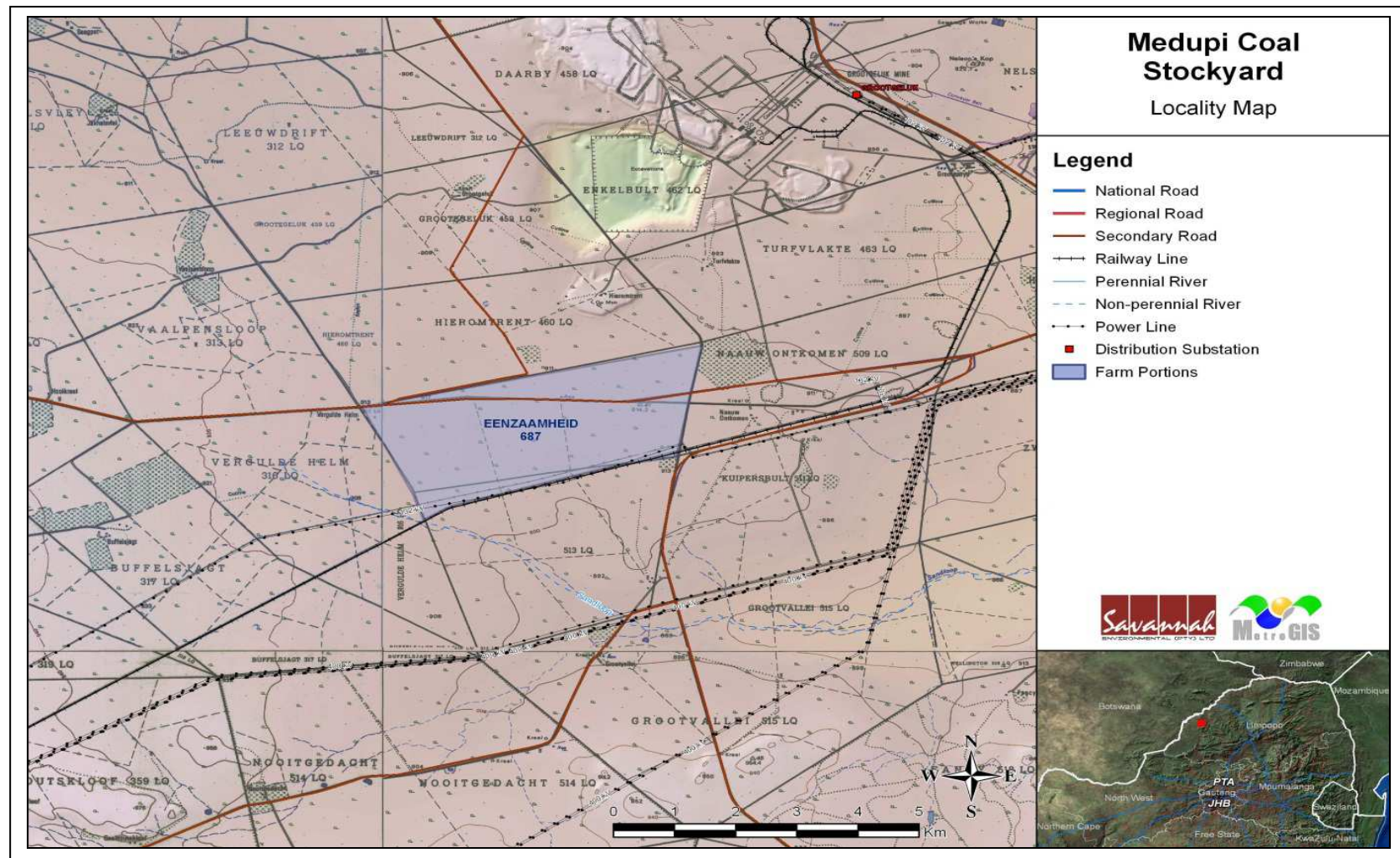


Figure 1: Locality Map showing the Farm Eenzaamheid 687 where the proposed coal stockyard is to be established.

2. Description of the Environment in the vicinity of the Proposed Project

The proposed project falls within Lephalale Local Municipality (NP362), which is in the Waterberg District Municipality (DC36), approximately 10 km east of Lephalale in the Limpopo Province.

Cattle and game farming practices dominate the general land-use character of the immediate area surrounding the proposed study area. The existing Matimba Power Station and the Grootegeluk Coal Mine are within a 10 km radius of the Farm Eenzaamheid 687 LQ.

There are no distinct riparian areas on Eenzaamheid 687 LQ and the general vegetation conforms largely to the regional vegetation types, i.e. Mixed Woodland (Van Rooyen and Bredenkamp in 'The Vegetation of South Africa, Lesotho and Swaziland' (Low and Rebelo, 1998)). There was however a small depression which was observed on the Eenzaamheid property and represent areas of surface water which is located in the area proposed for the establishment of the coal stockyard. The depression was, presumably created by large game during periods when they still roamed the area freely. The floristic status of these features however conforms to the surrounding vegetation. These areas therefore do not represent areas of particular sensitivity.

3. The Need for an Environmental Impact Assessment Process

In terms of sections 24 and 24D of the National Environmental Management Act (NEMA; Act No. 107 of 1998), as read with the Environmental Impact Assessment (EIA) Regulations of Government Notice R543 – R546, a Scoping and EIA process is required to be undertaken for the proposed project. However based on a motivation supplied to the National Department of Environmental Affairs in terms of Regulation 20(4) of Government Notice R543, a **downscaling** from a full EIA to a Basic Assessment Process has been approved for the proposed project and therefore a **Basic Assessment process** is being undertaken.

This project has been registered with National DEA under reference number 14/12/16/3/3/1/531

The following listed activities are applicable:

Notice Number	Activity	Description	Relevance of Regulation to Project
545, 18 June 2010	5	<i>The construction of facilities or infrastructure for any process or activity which requires a permit or license in terms of national or</i>	An air emissions license would be required for the proposed development in terms of the National Environmental Management: Air

Notice Number	Activity	Description	Relevance of Regulation to Project
		<i>provincial legislation governing the generation or release of emissions, pollution or effluent and which is not identified in Notice No. 544 of 2010 or included in the list of waste management activities published in terms of section 19 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) in which case that Act will apply.</i>	<p>Quality Act, 2004 (Act No. 39 of 2004). In terms of this Act, the storage of coal not situated on the premises of a mine or works as defined in the Mine Health and safety Act, where the storage capacity is 100 000 tonnes or more is considered to be a listed activity.</p> <p>In addition, in terms of Section 21 of the National Water Act (Act No 36 of 1998), a water use license may be required for the facility - DWA will need to approve the liners for the facility.</p>
545, 18 June 2010	15	<p><i>Physical alteration of undeveloped, vacant or derelict land for residential, retail, commercial, recreational, industrial or institutional use where the total area to be transformed is 20 hectares or more; except where such physical alteration takes place for:</i></p> <p><i>(i) linear development activities; or</i></p> <p><i>(ii) agriculture or afforestation where activity 16 in this Schedule will apply.</i></p>	Physical alteration of a site of approximately 2km x 2km for the establishment of a coal stockyard.
545, 18 June 2010	26	<i>Commencing of an activity, which requires an atmospheric emission license in terms of section 21 of the National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004), except where such commencement requires basic assessment in terms of Notice of No. R544 of 2010.</i>	In terms of section 21 of the National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004), the storage of coal not situated on the premises of a mine or works as defined in the Mine Health and safety Act, where the storage capacity is 100 000 tonnes or more is considered to be a listed activity. It is expected that approximately 38 million tonnes of coal would be stockpiled at this site up until 2025.
544, 18 June 2010	2	<i>The construction of facilities or infrastructure for the storage of ore or coal that requires an atmospheric emissions license in term of the National Environmental Management: Air Quality Act (Act</i>	The project involves the construction of infrastructure for the storage of coal. As approximately 38 million tonnes of coal would be stockpiled at this site up until 2025, an atmospheric emissions license would

Notice Number	Activity	Description	Relevance of Regulation to Project
		<i>no. 39 of 2004)</i>	be required in terms of the requirements of the National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004)
544, 18 June 2010	11	<i>The construction of: (i) canals; (ii) channels; (iii) bridges; (iv) dams; (v) weirs; (vi) bulk storm water outlet structures; (vii) marinas; (viii) jetties exceeding 50 square metres in size; (ix) slipways exceeding 50 square metres in size; (x) buildings exceeding 50 square metres in size; or (xi) infrastructure or structures covering 50 square metres or more where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line.</i>	A depression is located within the proposed development site. Impacting on this would constitute an impact on a watercourse.
544, 18 June 2010	18	<i>The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock or more than 5 cubic metres from: (i) a watercourse; (ii) the sea; (iii) the seashore; (iv) the littoral active zone, an estuary or a distance of 100 metres inland of the highwater mark of the sea or an estuary, whichever distance is the greater but excluding where such infilling, depositing, dredging, excavation,</i>	A depression is located within the proposed development site. Impacting on this would constitute an impact on a watercourse.

Notice Number	Activity	Description	Relevance of Regulation to Project
		<i>removal or moving; (a) is for maintenance purposes undertaken in accordance with a management plan agreed to by the relevant environmental authority; or (b) occurs behind the development setback line.</i>	

Savannah Environmental has been appointed as the independent environmental consultant, to undertake an Environmental Basic Assessment to identify and assess the potential environmental impacts associated with the proposed project. As part of these environmental studies, potential impacts have been assessed through existing information obtained from detailed specialist studies undertaken for the Medupi Power Station, and interested and affected parties (I&APs) have been actively involved through a public involvement process.

4. The Environmental Assessment Practitioners

Savannah Environmental was contracted by Eskom as the independent environmental consultant to undertake the Environmental Basic Assessment process for the proposed project. Savannah Environmental is not a subsidiary of or affiliated to Eskom. Furthermore, Savannah Environmental does not have any interests in secondary developments that may arise out of the authorisation of the proposed project.

Savannah Environmental is a specialist environmental consulting company providing holistic environmental management services, including environmental impact assessments and planning to ensure compliance and evaluate the risk of development; and the development and implementation of environmental management tools. Savannah Environmental benefits from the pooled resources, diverse skills and experience in the environmental field held by its team.

The Savannah Environmental team have considerable experience in environmental impact assessments and environmental management, and have been actively involved in undertaking environmental studies, for a wide variety of projects throughout South Africa, including those associated with electricity generation.

The EAP's from Savannah Environmental who are responsible for this project are (refer to Appendix G 1 for CVs):

- » Jo-Anne Thomas - a registered Professional Natural Scientist and holds a Master of Science degree. She has 14 years of experience consulting in the environmental

field. Her key focus is on strategic environmental assessment and advice; management and co-ordination of environmental projects, which includes integration of environmental studies and environmental processes into larger engineering-based projects and ensuring compliance to legislation and guidelines; compliance reporting; the identification of environmental management solutions and mitigation/risk minimising measures; and strategy and guideline development. She is currently responsible for the project management of EIAs for several renewable energy projects across the country.

- » Umeshree Naicker - the principle author of this report, holds an Honours Bachelor of Science degree in Environmental Science and has 4 years' experience in environmental management.

In order to adequately identify and assess potential environmental impacts associated with the proposed project, information has been obtained from the EIA process undertaken for the Medupi Power Station and associated infrastructure. No additional specialist studies have been undertaken for this proposed project.

SECTION A: ACTIVITY INFORMATION

Has a specialist been consulted to assist with the completion of this section?

<input type="checkbox"/>	NO ✓
--------------------------	----------------

If YES, please complete the form entitled "Details of specialist and declaration of interest for appointment of a specialist for each specialist thus appointed:

Any specialist reports must be contained in Appendix D.

1. ACTIVITY DESCRIPTION

Describe the activity, which is being applied for, in detail¹:

Eskom proposes the establishment of a coal stockyard to accommodate coal which is to be supplied to the power station from Exxaro's Grootegeeluk Mine from May 2012. The Farm Eenzaamheid 687 LQ has been identified as the preferred site for the coal stock yard. The following is relevant for this proposed development:

- » The coal stockyard is proposed to be established within the footprint of the already authorised ash dump (DEA Ref No 12/12/20/695 and waste license ref no 12/9/11/L50/6)
- » It is expected that approximately 38 million tonnes of coal would be stockpiled at this site up until 2028.
- » The area required for the stockyard is approximately 2km x 2km in extent.
- » Associated infrastructure would include coal conveyors between Grootegeeluk Mine and the coal stockpile, as well as between the coal stockpile and Medupi Power Station. It is proposed that use be made of the already authorised conveyor systems with slight alterations. The conveyor system will cross the authorised ash dump. The impacts in this regard have already been identified and assessed within the EIA for the power station.

The construction of the proposed coal stockyard will comprise of the following:

Site preparation

Site preparation activities will include clearance of vegetation at the infrastructure footprint, Some levelling of the land and terracing and establishment of site accessibility for vehicles and conveyors. These activities will require the stripping of topsoil, which will need to be appropriately stockpiled for use in rehabilitation.

Liner Earthworks and design

The liner earthworks will include constructing the conveyor terracing & liner installation, secondary liner, leakage detection layer, primary liner, and leachate collection layer.

The liner will be as per the Minimum Requirement Standard Specification (DWAF, 1998),

¹ Please note that this description should not be a verbatim repetition of the listed activity as contained in the relevant Government Notice, but should be a brief description of activities to be undertaken as per the project description.

Hazardous H:h; which is low to medium.

The Functions of the different layers for the lining on the coal stockyard is as follows (refer to Figure 2):

- Leachate Collection system - Leachate could result in high leachate head, possible clogging from pioneer layer.
- Primary Clay composite system - The main barrier and high probability to damage than the secondary
- Leak detection system - Has a twofold function, i.e. detecting and collection. It is the first indication of leakage.
- Secondary compacted clay - The final containment layer.



Figure 2: The different lining layers of the construction of the coal stock yard.

Holding Dam

The holding dam (including the coal stock yard) has been designed as a zero liquid effluent discharge (ZLED) site. A liner system has been allowed for underneath the coal stock yard to prevent seepage to the underground.

Seepage and dirty run-off from the coal stockyard area will collect in the holding dam from where the dirty water will evaporate. Should it be required, this water can be used for dust suppression. A leakage detection system is part of the holding dam. The basin of the dam is sloped in such way that any leakage water will migrate towards a leakage detection sump.

The layers above the liner will be deeper than the normal liner for ash to allow mobile plant to move on the site without damaging the liner.

Construct stockyard equipment

The construction of the stockyard equipment would entail designing, supplying, installing and commissioning a system of conveyors and stacker-reclaimer to meet technical specifications. There will be eight steel conveyor belts of varying lengths and a bucket wheel stacker-reclaimer machine.

Trucks will be used to transport all components to site. The normal civil engineering

construction equipment for the civil works (e.g. trucks, graders, compaction equipment, cement mixers, etc.) will be used. The equipment will be transported to the site using appropriate routes, and the dedicated access/haul road to the site itself.

The site is to be designed to cater for both coal storage and later for ash dumping (long-term use after 2028) with minimum changes to the overburden above the liner. It will not be necessary to remove the liner after the coal at the stockyard is exhausted. The over burden will however be skimmed to remove any coal remnants in readiness for ash disposal.

2. FEASIBLE AND REASONABLE ALTERNATIVES

"Alternatives," in relation to a proposed activity, means different means of meeting the general purpose and requirements of the activity, which may include alternatives to -

- (a) The property on which or location where it is proposed to undertake the activity;
- (b) The type of activity to be undertaken;
- (c) The design or layout of the activity;
- (d) The technology to be used in the activity;
- (e) The operational aspects of the activity; and
- (f) The option of not implementing the activity.

Describe alternatives that are considered in this application. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity could be accomplished in the specific instance taking account of the interest of the applicant in the activity. The no-go alternative must in all cases be included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed. The determination of whether site or activity (including different processes etc.) or both are appropriate needs to be informed by the specific circumstances of the activity and its environment. After receipt of this report the competent authority may also request the applicant to assess additional alternatives that could possibly accomplish the purpose and need of the proposed activity if it is clear that realistic alternatives have not been considered to a reasonable extent.

Paragraphs 3 – 13 below should be completed for each alternative.

The following describes the potential alternatives identified as well as reasons why some were not assessed (as required in terms of Regulation 31(3) of the EIA Regulations).

a) The property on which or location where it is proposed to undertake the activity:

No site alternatives were proposed for this project as the proposed site has already been identified as a preferred site for the establishment of ancillary infrastructure (such as the ash dump and coal stockyard), and has been authorised as an ash dump site in the DEA Ref No 12/12/20/695 and waste license no 12/9/11/L50/6. As a result of the operational constraints associated with the Medupi Power Station, no feasible site alternatives have been identified for investigation within this Basic Assessment process.

(b) The type of activity to be undertaken:

The establishment of the coal stock yard is to store coal for a period before the coal is reclaimed and conveyed to the power station. No other development would be able to serve the same purpose as the proposed stockyard as this area will be impacted on in the future due to the deposition of ash. There are therefore no feasible alternatives in this regard.

(c) The design or layout of the activity:

The design of the stockyard has included an approved liner by the Department of Water Affairs. The site is an authorised ash dump site. The approved liner is designed to accommodate the future intended use as an ash dump site. There are no feasible design or layout alternatives.

(d) The technology to be used in the activity:

Few technological options exist for the establishment of coal stockyard. Those that are available are usually differentiated the type of lining and terracing, the gradient of the land, geology, climate and hydrology. The construction, operation and decommissioning of the facility will also be the same irrespective of the technology chosen. Therefore, no alternatives were assessed in this regard.

(e) The operational aspects of the activity:

No operational alternatives were assessed as no feasible and reasonable operational alternatives were identified for the proposed development.

f) The option of not implementing the activity.

This option is assessed as the "no go alternative" in this Draft Basic Assessment Report.

3. ACTIVITY POSITION

Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in degrees and decimal minutes. The minutes should have at least three decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.

List alternative sites, if applicable.

Alternative:

Alternative S1² (preferred or only site alternative)

Alternative S2 (if any)

Alternative S3 (if any)

Latitude (S):

Longitude (E):

23°	70941'	27°	52924'
0	1	0	1
0	1	0	1

In the case of linear activities:

Alternative:

Alternative S1 (preferred or only route alternative)

Latitude (S):

Longitude (E):

² "Alternative S." refers to site alternatives.

- Starting point of the activity
- Middle/Additional point of the activity
- End point of the activity

Alternative S2 (if any)

- Starting point of the activity
- Middle/Additional point of the activity
- End point of the activity

Alternative S3 (if any)

- Starting point of the activity
- Middle/Additional point of the activity
- End point of the activity

For route alternatives that are longer than 500m, please provide an addendum with co-ordinates taken every 250m along the route for each alternative alignment.

4. PHYSICAL SIZE OF THE ACTIVITY

Indicate the physical size of the preferred activity/technology as well as alternative activities/technologies (footprints):

Alternative:

Alternative A1³ (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

Size of the activity:

400 000m²
m ²
m ²

Or, for linear activities:

Alternative:

Alternative A1 (preferred)

Alternative A2 (if any)

Alternative A3 (if any)

m
m
m

Indicate the size of the alternative sites or servitudes (within which the above footprints will occur):

Size of the site/servitude:

Alternative:

Alternative A1

Alternative A2 (if any)

Alternative A3 (if any)

m ²
m ²
m ²

³ "Alternative A." refers to activity, process, technology or other alternatives.

5. SITE ACCESS

Does ready access to the site exist?

YES ✓

If NO, what is the distance over which a new access road will be built

Describe the type of access road planned:

The proposed coal stockyard development site falls within the larger footprint for the Medupi Power Station. Access to the site has been established as part of the construction phase of the power station. This existing access will be used during the construction and operation of the coal stockyard. In addition, the conveyor servitude is designed to allow road access on either side of the conveyor for conveyor maintenance requirements. This is part of the civil scope of work on terrace preparation.

Include the position of the access road on the site plan and required map, as well as an indication of the road in relation to the site.

6. SITE OR ROUTE PLAN

A detailed site or route plan(s) must be prepared for each alternative site or alternative activity. It must be attached as Appendix A to this document.

The site or route plans must indicate the following:

- 6.1 The scale of the plan which must be at least a scale of 1:500;
- 6.2 The property boundaries and numbers of all the properties within 50 metres of the site;
- 6.3 The current land use as well as the land use zoning of each of the properties adjoining the site or sites;
- 6.4 The exact position of each element of the application as well as any other structures on the site;
- 6.5 The position of services, including electricity supply cables (indicate above or underground), water supply pipelines, boreholes, street lights, sewage pipelines, storm water infrastructure and telecommunication infrastructure;
- 6.6 All trees and shrubs taller than 1.8 metres;
- 6.7 Walls and fencing including details of the height and construction material;
- 6.8 Servitudes indicating the purpose of the servitude;
- 6.9 Sensitive environmental elements within 100 metres of the site or sites including (but not limited thereto):
 - Rivers;
 - The 1:100 year flood line (where available or where it is required by DWA);
 - Ridges;
 - Cultural and historical features;
 - Areas with indigenous vegetation (even if it is degraded or invested with alien species);
- 6.10 For gentle slopes the 1 metre contour intervals must be indicated on the plan and whenever the slope of the site exceeds 1:10, the 500mm contours must be indicated on the plan; and
- 6.11 The positions from where photographs of the site were taken.

A detailed site plan has been included and attached as **Appendix A**.

7. SITE PHOTOGRAPHS

Colour photographs from the centre of the site must be taken in at least the eight major compass directions with a description of each photograph. Photographs must be attached under Appendix B to this form. It must be supplemented with additional photographs of relevant features on the site, if applicable.

Colour photographs taken on site together with a description of each photograph are attached within **Appendix B**.

8. FACILITY ILLUSTRATION

A detailed illustration of the activity must be provided at a scale of 1:200 as Appendix C for activities that include structures. The illustrations must be to scale and must represent a realistic image of the planned activity. The illustration must give a representative view of the activity.

The facility illustration is attached within **Appendix C**.

9. ACTIVITY MOTIVATION

9(a) Socio-economic value of the activity

What is the expected capital value of the activity on completion?	Estimated at +/- R1.3 billion
What is the expected yearly income that will be generated by or as a result of the activity?	The proposed development is a storage facility and not an income generation activity
Will the activity contribute to service infrastructure?	YES ✓
Is the activity a public amenity?	NO ✓
How many new employment opportunities will be created in the development phase of the activity?	
What is the expected value of the employment opportunities during the development phase?	± R4.5m
What percentage of this will accrue to previously disadvantaged individuals?	Due to urgency and scale of operation, most operations will be mechanised to a large extent. Mechanisation seldom creates a lot of semi-skilled employment.
How many permanent new employment opportunities will be created during the operational phase of the activity?	This will be a temporary infrastructure and forms part of the Medupi Power Station, Therefore, this proposed development will not create any additional permanent jobs on completion

What is the expected current value of the employment opportunities during the first 10 years?	At this stage, unknown
What percentage of this will accrue to previously disadvantaged individuals?	At this stage, unknown

9(b) Need and desirability of the activity

Motivate and explain the need and desirability of the activity (including demand for the activity):

NEED:			
1.	Was the relevant provincial planning department involved in the application?		NO ✓
2.	Does the proposed land use fall within the relevant provincial planning framework?	YES ✓	
3.	If the answer to questions 1 and / or 2 was NO, please provide further motivation / explanation:		
	The proposed site is an authorised ash dump site.		

DESIRABILITY:			
1.	Does the proposed land use / development fit the surrounding area?	YES ✓	
2.	Does the proposed land use / development conform to the relevant structure plans, SDF, and planning visions for the area?	YES ✓	
3.	Will the benefits of the proposed land use / development outweigh the negative impacts of it?	YES ✓	
4.	If the answer to any of the questions 1 - 3 was NO, please provide further motivation / explanation:		
5.	Will the proposed land use / development impact on the sense of place?		NO ✓
6.	Will the proposed land use / development set a precedent?		NO ✓
7.	Will any person's rights be affected by the proposed land use / development?		NO ✓
8.	Will the proposed land use / development compromise the "urban edge"?		NO ✓
9.	If the answer to any of the question 5 - 8 was YES, please provide further motivation / explanation.		

BENEFITS:			
1.	Will the land use / development have any benefits for society in general?	YES ✓	
2.	Explain: Coal will be utilised by the Medupi Power Station, which will generate power for transmission to the national electricity grid. This will strengthen the power supply to the country. The current contractual agreement that Eskom has with its supplier is for the provision of coal for commissioning and operational purposes. Currently due to		

	anticipated delays in commissioning and operations, the amount of coal that would normally be required would exceed the capacity of the current coal stockyard. This is because it was anticipated that coal would be consumed during this period. That would imply that coal would be leaving the stockyard as new coal came in. Due to the delays, no coal would be consumed and therefore the current coal stockyard would exceed its holding capacity. This will require a new coal stockyard.		
3.	Will the land use / development have any benefits for the local communities where it will be located?	YES ✓	
4.	Explain: Local communities surrounding the development site may benefit from limited job opportunities, primarily low to semi-skilled positions, during the construction phase. The Project Labour Agreement (PLA) for Medupi Power Station stipulates that 50% of low to semi-skilled workers should come from the local community. However, Eskom cannot guarantee the employment of local community members for construction as workers are normally employed by Contractors based on their qualifications, skills and experience. In addition, due to urgency and scale of operation, most operations will be mechanised to a larger extent. Mechanisation seldom creates a lot of semi-skilled employment.		

10. APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES

List all legislation, policies and/or guidelines of any sphere of government that are applicable to the application as contemplated in the EIA regulations, if applicable:

Title of legislation, policy or guideline:	Administering authority:	Date:
National Environmental Management Act (Act No 107 of 1998)	National and Provincial Department of Environmental Affairs	1998
National Water Act (Act No 36 of 1998)	Department of Water Affairs	1998
Conservation of Agricultural Resources Act (Act No 43 of 1983)	Department of Agriculture	1983
National Heritage Resources Act (Act No 25 of 1999)	South African Heritage Resources Agency	1999
National Environmental Management: Biodiversity Act (Act No. 10 of 2004)	National Department of Environmental Affairs	2004
National Forests Act (Act No. 84 of 1998)	National Department of Forestry	1998
National Environment Management: Air Quality Act (Act No. 39, 2004)	National Department of Environmental Affairs	2004

11. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

11(a) Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase?

YES
✓

If yes, what estimated quantity will be produced per month?

Solid construction waste will consist mainly of vegetation, spoil material from clearing activities;
0 to 4 year area - 1,165,000m²

Vegetation - 40 000m³.
Topsoil - 365 000m³.
Hill wash - 850 000m³.

How will the construction solid waste be disposed of (describe)?

It is anticipated that construction waste will be comprised mainly of vegetation and spoil material from clearing activities. This is to be stockpiled and used to rehabilitate the slopes of the ash dump.

All general and hazardous waste will continue to be transported to the appropriately licenced landfill site/s, as detailed in the Integrated Waste Management Plan for the Medupi Power Station.

The new landfill site at Matimba Power Station (which is currently still in the planning phase) will be used once complete.

Where will the construction solid waste be disposed of (describe)?

Waste will be trucked to appropriately licensed landfill sites, as detailed above.

Will the activity produce solid waste during its operational phase?

<input checked="" type="checkbox"/>	NO ✓
m ³	

If yes, what estimated quantity will be produced per month?

How will the solid waste be disposed of (describe)?

N/A

Where will the solid waste be disposed if it does not feed into a municipal waste stream (describe)?

N/A

If the solid waste (construction or operational phases) will not be disposed of in a registered landfill site or be taken up in a municipal waste stream, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

Can any part of the solid waste be classified as hazardous in terms of the relevant legislation?

<input checked="" type="checkbox"/>	NO ✓
-------------------------------------	----------------

If yes, inform the competent authority and request a change to an application for scoping and EIA.

Is the activity that is being applied for a solid waste handling or treatment facility?

	NO ✓
--	----------------

If yes, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

11(b) Liquid effluent

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system?

	NO ✓
--	----------------

If yes, what estimated quantity will be produced per month?

	m ³
--	----------------

Will the activity produce any effluent that will be treated and/or disposed of onsite?

YES ✓	
-----------------	--

If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

Will the activity produce effluent that will be treated and/or disposed of at another facility?

	NO ✓
--	----------------

If yes, provide the particulars of the facility:

Facility name:			
Contact person:			
Postal address:			
Postal code:			
Telephone:		Cell:	
E-mail:		Fax:	

Describe the measures that will be taken to ensure the optimal reuse or recycling of waste water, if any:

Run off water (rain) goes into dirty water dams to be recycled for ash dump operation or for dust suppression.

11(c) Emissions into the atmosphere

Will the activity release emissions into the atmosphere?

YES ✓	
YES ✓	

If yes, is it controlled by any legislation of any sphere of government?

If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

This is not necessary since DEA have granted authorisation to undertake a Basic Assessment process for this project on the basis of a

motivation submitted at the outset of the process.

If no, describe the emissions in terms of type and concentration:

N/A

11(d) Generation of noise

Will the activity generate noise?

NO
✓

If yes, is it controlled by any legislation of any sphere of government?

If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

If no, describe the noise in terms of type and level:

Noise from the operations from the ash dump area will not be significant in relation to that produced from the other operations associated with the construction and operation of the power station.

12. WATER USE

Please indicate the source(s) of water that will be used for the activity by ticking the appropriate box(s)

Municipal	Water board	Groundwater	River, stream, dam or lake	Other ✓	The activity will not use water
Water use would be insignificant, i.e. small quantities for dust control and a bit for production of concrete. All of this water would come from the existing Medupi construction water supply already allocated for construction purposes.					

If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate the volume that will be extracted per month:

N/A

Does the activity require a water use permit from the Department of Water Affairs?

YES

If yes, please submit the necessary application to the Department of Water Affairs and attach proof thereof to this application if it has been submitted.

See Appendix G3: Water Use Licence

13. ENERGY EFFICIENCY

Describe the design measures, if any, that have been taken to ensure that the activity is energy efficient:

None anticipated.

Describe how alternative energy sources have been taken into account or been built into the design of the activity, if any:

None anticipated.

SECTION B: SITE/AREA/PROPERTY DESCRIPTION

Important notes:

For linear activities (pipelines, etc.) as well as activities that cover very large sites, it may be necessary to complete this section for each part of the site that has a significantly different environment. In such cases please complete copies of Section C and indicate the area, which is covered by each copy No. on the Site Plan.

Section Copy No. (e.g. A):

1. Paragraphs 1 - 6 below must be completed for each alternative.

2. Has a specialist been consulted to assist with the completion of this section?

<input type="checkbox"/>	NO ✓
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If YES, please complete the form entitled "Details of specialist and declaration of interest" for each specialist thus appointed:

All specialist reports must be contained in **Appendix D**.

Property
description/physical
address:

Farm Eenzaamheid 678 LQ

(Farm name, portion etc.) Where a large number of properties are involved (e.g. linear activities), please attach a full list to this application.

Marapong

In instances where there is more than one town or district involved, please attach a list of towns or districts to this application.

Current
zoning: land-use

Industrial

In instances where there is more than one current land-use zoning, please attach a list of current land use zonings that also indicate which portions each use pertains to, to this application.

Is a change of land-use or a consent use application required?

<input type="checkbox"/>	NO
<input type="checkbox"/>	NO

Must a building plan be submitted to the local authority?

Locality map:

An A3 locality map must be attached to the back of this document, as Appendix A. The scale of the locality map must be relevant to the size of the development (at least 1:50 000. For linear activities of more than 25 kilometres, a smaller scale e.g. 1:250 000 can be used. The scale must be indicated on the map.) The map must indicate the following:

- An indication of the project site position as well as the positions of the alternative sites, if any;
- Road access from all major roads in the area;
- Road names or numbers of all major roads as well as the roads that provide access to the site(s);
- All roads within a 1km radius of the site or alternative sites; and
- A north arrow;
- A legend; and
- Locality GPS co-ordinates (Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in degrees and decimal minutes. The minutes should have at least three decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection).

The above plans have been included and attached as **Appendix A**

1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Alternative S1:

Flat ✓	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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Alternative S2 (if any):

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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Alternative S3 (if any):

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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2. LOCATION IN LANDSCAPE

Indicate the landform(s) that best describes the site:

2.1 Ridgeline

2.2 Plateau

2.3 Side slope of hill/mountain

2.4 Closed valley

2.5 Open valley

2.6 Plain

2.7 Undulating plain / low hills

2.8 Dune

2.9 Seafront

No significant slopes are present within the study area.

3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

Is the site(s) located on any of the following (tick the appropriate boxes)?

	Alternative S1:		Alternative S2 (if any):		Alternative S3 (if any):	
Shallow water table (less than 1.5m deep).	YES ✓	<input checked="" type="checkbox"/>	YES	NO	YES	NO
Dolomite, sinkhole, or doline areas.	<input checked="" type="checkbox"/>	NO ✓	YES	NO	YES	NO
Seasonally wet soils (often close to water bodies).	<input checked="" type="checkbox"/>	NO ✓	YES	NO	YES	NO
Unstable rocky slopes or steep slopes with loose soil.	<input checked="" type="checkbox"/>	NO ✓	YES	NO	YES	NO
Dispersive soils (soils that dissolve in water).	<input checked="" type="checkbox"/>	NO	YES	NO	YES	NO
Soils with high clay content (clay fraction more than 40%).	<input checked="" type="checkbox"/>	NO ✓	YES	NO	YES	NO
Any other unstable soil or geological feature.	YES ✓	<input checked="" type="checkbox"/>	YES	NO	YES	NO
An area sensitive to erosion.	<input checked="" type="checkbox"/>	NO ✓	YES	NO	YES	NO

If you are unsure about any of the above or if you are concerned that any of the above aspects may be an issue of concern in the application, an appropriate specialist should be appointed to assist in the completion of this section. (Information in respect of the above will often be available as part of the project information or at the planning sections of local authorities. Where it exists, the 1:50 000 scale Regional Geotechnical Maps prepared by the Council for Geo Science may also be consulted).

Geotechnical studies revealed that the Eenzaamheid Fault lies a short distance to the south of the northern boundary of this farm.

There are fairly widely spaced lineaments (probably dykes) which cross the farm. All of these rocks are, however, overlain by sand and gravel. A number of quarries in the area which have

been used previously for road construction show that the sand cover is mostly less than 3 m thick; beneath it gravels, sometimes in a ferruginous or calcareous matrix and usually up to 1 m thick, overlie bedrock, which is usually of soft to hard rock consistency. The Waterberg bedrock is likely to be able to support high foundation pressures.

The geology of the area comprises sandstone and mudstone sediments of the Matlabas Subgroup, Waterberg Group, undifferentiated shale, sandstone and coal of the Karoo Sequence and also alluvium (Geological Survey, 1986).

4. GROUNDCOVER

Indicate the types of groundcover present on the site:

The location of all identified rare or endangered species or other elements should be accurately indicated on the site plan(s).

Natural veld - good condition ^E	Natural veld with scattered aliens ^E ✓	Natural veld with heavy alien infestation ^E	Veld dominated by alien species ^E	Gardens
Sport field	Cultivated land	Paved surface	Building or other structure	Bare soil

If any of the boxes marked with an "E" is ticked, please consult an appropriate specialist to assist in the completion of this section if the environmental assessment practitioner doesn't have the necessary expertise.

The study area is situated within the Savannah Biome, specifically within the Mixed Bushveld vegetation types. The Savannah biome is characterised by a grassy ground layer and a distinct upper layer of woody plants.

Mixed Bushveld represents a great variety of plant communities, with many variations and transitions. The vegetation varies from a dense, short bushveld to a rather open tree savannah. The site investigation revealed that the dominate vegetation community is the Primary Woodland (Figure 3). The herbaceous layer is relative poor in species, providing evidence of the over grazed state of the vegetation.

The floristic species diversity of the study area is considered relatively poor (i.e. the site investigation revealed the presence of approximately 120 plant species). This relatively low diversity reflects the general absence of topographical and environmental diversity that cause changes to the land surface resulting in the formation of varying communities and hence diverse species composition.

Four red data flora species were listed within the relevant quarter degree square. None of these species were observed in the study area during the site investigation.

5. LAND USE CHARACTER OF SURROUNDING AREA

Indicate land uses and/or prominent features that does currently occur within a 500 m radius of the site and give description of how this influences the application or may be impacted upon by the application:

5.1 Natural area

- 5.2 Low density residential
- 5.3 Medium density residential
- 5.4 High density residential
- 5.5 Informal residential ^A
- 5.6 Retail commercial and warehousing
- 5.7 Light industrial
- 5.8 Medium industrial ^{AN}
- 5.9 Heavy industrial ^{AN}

5.10 Power station

- 5.11 Office/consulting room
- 5.12 Military or police base/station/compound
- 5.13 Spoil heap or slimes dam ^A
- 5.14 Quarry, sand, or borrow pit
- 5.15 Dam or reservoir
- 5.16 Hospital/medical centre
- 5.17 School
- 5.18 Tertiary education facility
- 5.19 Church
- 5.20 Old age home
- 5.21 Sewage treatment plant ^A
- 5.22 Train station or shunting yard ^N

5.23 Railway line ^N

- 5.24 Major road (4 lanes or more) ^N
- 5.25 Airport ^N
- 5.26 Harbour
- 5.27 Sport facilities
- 5.28 Golf course
- 5.29 Polo fields
- 5.30 Filling station ^H
- 5.31 Landfill or waste treatment site
- 5.32 Plantation

5.33 Agriculture

- 5.34 River, stream or wetland
- 5.35 Nature conservation area
- 5.36 Mountain, koppie or ridge
- 5.37 Museum
- 5.38 Historical building
- 5.39 Protected Area
- 5.40 Graveyard
- 5.41 Archaeological site
- 5.42 Other land uses (describe)

If any of the boxes marked with an "N" are ticked, how this impact will / be impacted upon by the proposed activity?

A railway line runs in close proximity to the proposed coal stock yard.

If any of the boxes marked with an "An" are ticked, how will this impact / be impacted upon by the proposed activity?

If YES, specify and explain:

If YES, specify:

N/A

If any of the boxes marked with an "H" are ticked, how will this impact / be impacted upon by the proposed activity.

If YES, specify and explain:

If YES, specify:

6. CULTURAL/HISTORICAL FEATURES

Are there any signs of culturally or historically significant elements, as defined in section 2 of the National Heritage Resources Act, 1999, (Act No. 25 of 1999), including

NO ✓

Archaeological or palaeontological sites, on or close (within 20m) to the site?

NO ✓

If YES, explain:

See below.

If uncertain, conduct a specialist investigation by a recognised specialist in the field to establish whether there is such a feature(s) present on or close to the site.

Briefly explain the findings of the specialist:

From the studies undertaken during the EIA for Medupi Power Station (DEA Ref No 12/12/20/695), no sites, features or objects of cultural heritage significance were identified within the property proposed for the establishment of the coal stockyard.

Will any building or structure older than 60 years be affected in any way?

NO ✓

Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?

NO ✓

If yes, please submit or, make sure that the applicant or a specialist submits the necessary application to SAHRA or the relevant provincial heritage agency and attach proof thereof to this application if such application has been made.

SECTION C: PUBLIC PARTICIPATION

1. ADVERTISEMENT

Notices advertising the proposed project were placed / distributed as follows on the 1 February 2012 (refer to Appendix E):

- » A2 site notices were placed on the fence of the proposed development site as well as the Old Main Gate 1 (Appendix E2).
- » An A2 notice was placed on the entrance of the Eskom Gates and the entrance of the parking lot (Appendix E2).
- » A4 notices were placed at the Lephalale Municipality, Lephalale Library and the Pick N Pay store (Appendix E2).
- » Stakeholder letters were distributed to the database of registered parties. This included relevant officials from the National and Provincial Authorities, the local and district municipalities, key stakeholders and organs of state relevant to the proposed project together with the Summary and Fact Sheet and the Draft Scoping Report review period (Appendix E3).
- » An advertisement was notice was placed in The Star (English – 26 March 2012) and The Mogol pos (Afrikaans – 29 March 2011) to advertise the Basic Assessment process and to advertise the availability of the Draft Basic Assessment Report (Appendix E1).

2. CONTENT OF ADVERTISEMENTS AND NOTICES

The contents of the notices and adverts were in accordance with the following requirements:

- (a) Indicate the details of the application which is subjected to public participation; and
- (b) State –
 - (i) That the application has been submitted to the competent authority in terms of these Regulations, as the case may be;
 - (ii) Whether basic assessment or scoping procedures are being applied to the application, in the case of an application for environmental Authorisation;
 - (iii) The nature and location of the activity to which the application relates;
 - (iv) Where further information on the application or activity can be obtained; and
 - (iv) The manner in which and the person to whom representations in respect of the application may be made.

3. PLACEMENT OF ADVERTISEMENTS AND NOTICES

Where the proposed activity may have impacts that extend beyond the municipal area where it is located, a notice must be placed in at least one provincial newspaper or national newspaper, indicating that an application will be submitted to the competent authority in terms of these regulations, the nature and location of the activity, where further information on the proposed activity can be obtained and the manner in which representations in respect of the application can be made, unless a notice has been placed in any *Gazette* that is published specifically for the purpose of providing notice to the public of applications made in terms of the EIA regulations. Advertisements and notices must make provision for all alternatives.

The advertisement, site notices, and stakeholder letters detailed the Basic Assessment process, the nature, and location of the proposed project, where further information on the proposed activity could be obtained and the manner in which representations on the application could be made. The advertisement provided the project details and indicated the availability of the draft Basic Assessment Report.

The Draft Basic Assessment Report was distributed to relevant organs of state for comment and a copy of the report was placed in the Lephalale Local Municipality for the public from 26 March to 30 April 2012. An advertisement was placed in the Mogalpos to inform the public of the availability of the Draft Basic Assessment Report. The distribution of the Draft BAR is attached in **Appendix E4**.

Advertisements are attached in **Appendix E1**.

4. DETERMINATION OF APPROPRIATE MEASURES

The practitioner must ensure that the public participation is adequate and must determine whether a public meeting or any other additional measure is appropriate or not based on the particular nature of each case. Special attention should be given to the involvement of local community structures such as Ward Committees, ratepayers associations and traditional authorities where appropriate. Please note that public concerns that emerge at a later stage that should have been addressed may cause the competent authority to withdraw any authorisation it may have issued if it becomes apparent that the public participation process was inadequate.

An advertisement, and site notices is deemed adequate for the public involvement process. A Summary and Fact Sheet providing background to the proposed project and Draft BAR was distributed to the relevant organs of state (Appendix E 3 and E 4).

5. COMMENTS AND RESPONSE REPORT

The practitioner must record all comments and respond to each comment of the public before the application is submitted. The comments and responses must be captured in a comments and response report as prescribed in the EIA regulations and be attached to this application. The comments and response report must be attached under Appendix E.

See Appendix E 5 Comments and Response Report

6. AUTHORITY PARTICIPATION

Please note that a complete list of all organs of state and or any other applicable authority with their contact details must be appended to the basic assessment report or scoping report, whichever is applicable.

Authorities are key interested and affected parties in each application and no decision on any application will be made before the relevant local authority is provided with the opportunity to give input.

List of authorities informed:

Authorities informed of the Basic Assessment process included:

The Department of Water Affairs and Forestry (DWAF).

The Limpopo Department of Agriculture.

The Limpopo Department of Minerals and Energy.

South African Heritage Resources Agency (SAHRA).

The DEAT Chief Air Pollution Control Officer (CAPCO).

The Limpopo Department of Land Affairs.

The Department of Transport.

The Department of Public Works.

Lephalale Local Municipality.

Waterberg District Municipality

(Correspondence attached in **Appendix E3**)

List of authorities from whom comments have been received:

Comments have being received from the Waterberg District Municipality - Air Quality.

7. CONSULTATION WITH OTHER STAKEHOLDERS

Note that, for linear activities, or where deviation from the public participation requirements may be appropriate, the person conducting the public participation process may deviate from the requirements of that sub regulation to the extent and in the manner as may be agreed to by the competent authority. Proof of any such agreement must be provided, where applicable.

Has any comment been received from stakeholders?



NO ✓

If "YES", briefly describe the feedback below (also attach copies of any correspondence to and from the stakeholders to this application):

None to date

SECTION D: IMPACT ASSESSMENT

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2010, and should consider applicable official guidelines. The issues raised by interested and affected parties should also be addressed in the assessment of impacts.

1. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

List the main issues raised by interested and affected parties.

Issues raised by the Organs of State:

1. Requirement for an Air emissions License

Response from the practitioner to the issues raised by the interested and affected parties (A full response must be given in the Comments and Response Report that must be attached to this report as Annexure E):

Attached as Appendix E 5

2. IMPACTS THAT MAY RESULT FROM THE PLANNING, DESIGN, CONSTRUCTION, OPERATIONAL, DECOMMISSIONING, AND CLOSURE PHASES AS WELL AS PROPOSED MANAGEMENT OF IDENTIFIED IMPACTS AND PROPOSED MITIGATION MEASURES

List the potential direct, indirect and cumulative property/activity/design/technology/operational alternative related impacts (as appropriate) that are likely to occur as a result of the planning and design phase, construction phase, operational phase, decommissioning and closure phase, including impacts relating to the choice of site/activity/technology alternatives as well as the mitigation measures that may eliminate or reduce the potential impacts listed.

2.1 IMPACTS THAT MAY RESULT FROM THE PLANNING AND DESIGN PHASE

Alternative (preferred alternative)

No impacts are anticipated that may result from the planning and design phase of the proposed development.

2.2 IMPACTS THAT MAY RESULT FROM THE CONSTRUCTION PHASE

Potential impacts associated with the construction of the proposed project are discussed below.

The following methodology was used in assessing impacts related to the proposed development.

All impacts are assessed according to the following criteria:

- » The **nature**, a description of what causes the effect, what will be affected, and how it will be affected.
- » The **extent**, wherein it is indicated whether the impact will be local (limited to the immediate area or site of development), regional, national or international. A score of between 1 and 5 is assigned as appropriate (with a score of 1 being low and a score of 5 being high).
- » The **duration**, wherein it is indicated whether:
 - * The lifetime of the impact will be of a very short duration (0–1 years) – assigned a score of 1;
 - * The lifetime of the impact will be of a short duration (2–5 years) – assigned a score of 2;
 - * Medium-term (5–15 years) – assigned a score of 3;
 - * Long term (> 15 years) – assigned a score of 4; or;
 - * Permanent – assigned a score of 5.
- » The **magnitude**, quantified on a scale from 0–10, where a score is assigned:
 - * 0 is small and will have no effect on the environment;
 - * 2 is minor and will not result in an impact on processes;
 - * 4 is low and will cause a slight impact on processes;
 - * 6 is moderate and will result in processes continuing but in a modified way;
 - * 8 is high (processes are altered to the extent that they temporarily cease); and
 - * 10 is very high and results in complete destruction of patterns and permanent cessation of processes.
- » The **probability** of occurrence, which describes the likelihood of the impact actually occurring. Probability is estimated on a scale, and a score assigned:
 - * Assigned a score of 1–5, where 1 is very improbable (probably will not happen);
 - * Assigned a score of 2 is improbable (some possibility, but low likelihood);
 - * Assigned a score of 3 is probable (distinct possibility);
 - * Assigned a score of 4 is highly probable (most likely); and
 - * Assigned a score of 5 is definite (impact will occur regardless of any prevention measures).
- » The **significance**, which is determined through a synthesis of the characteristics described above (refer formula below) and can be assessed as low, medium or high.
- » The **status**, which is described as positive, negative, or neutral.
- » The degree to which the impact can be reversed.
- » The degree to which the impact may cause irreplaceable loss of resources.
- » The degree to which the impact can be mitigated.

The **significance** is determined by combining the criteria in the following formula:

$S=(E+D+M)P$; where

S = Significance weighting

E = Extent

D = Duration

M = Magnitude

P = Probability

The **significance** weightings for each potential impact are as follows:

- » **< 30 points:** Low (i.e. where this impact would not have a direct influence on the decision to develop in the area),
- » **30-60 points:** Medium (i.e. where the impact could influence the decision to develop in the area unless it is effectively mitigated),
- » **> 60 points:** High (i.e. where the impact must have an influence on the decision process to develop in the area).

Alternative S1 (preferred alternative)

The potential impacts associated with establishment of the coal stockyard are discussed below.

As mentioned previously, the impacts of the proposed coal stockyard has been assessed in a previous EIA which was undertaken by Bohlweki Environmental in May 2006 for the proposed Medupi Power Station and associated infrastructure (DEA Ref No 12/12/20/695) and a Record of Decision was issued (September 2006). The following impacts were identified and are expected to be relevant to the establishment of the proposed coal stockyard.

1. Potential impacts on heritage resources

No objects of heritage value were recorded on the Farm Eenzaamheid 678 during the heritage impact assessment for the power station. Therefore, the potential for impacts to occur is considered to be very low. However, during construction, artefacts may be unearthed which could result in impacts on these resources.

Impact table summarising the significance of impacts on heritage resources

Nature of impact: Destruction of heritage resources		
	Without mitigation	With mitigation
Extent	Local (1)	Local (1)
Duration	Permanent (5)	Permanent (5)
Magnitude	Small (0)	Small (0)
Probability	Highly improbable (1)	Highly improbable (1)
Significance	Low (6)	Low (6)
Status (positive or negative)	Negative	Negative
Reversibility	Not possible	Not possible
Irreplaceable loss of resources?	Yes	Yes
Can impacts be mitigated?	Not required	

Mitigation:

- » As no heritage resources were recorded on the proposed development site, no mitigation measures are required.
- » If a heritage object is found, work in that area must be stopped immediately, and appropriate specialists brought in to assess the site, notify the administering authority of the item/site, and undertake due/required processes

Cumulative impacts:

No cumulative impacts are expected.

Residual impacts:

No residual impacts are expected.

2. Potential impacts on soils and agricultural potential

Soils on site are sandy, have an increased susceptibility to wind and excessive free drainage, and therefore not deemed of high agricultural potential. The impact on soils and agricultural potential will be limited to the immediate area or site of development (local).

Impact tables summarising the significance of impacts on soil and agricultural potential

Nature of impact: Loss of agricultural potential and land capability

	Without mitigation	With mitigation
Extent	Low (1)	Low (1)
Duration	Permanent term (5)	Permanent term (5)
Magnitude	Minor (2)	Minor (2)
Probability	Improbable (2)	Probable (3)
Significance	Low (16)	Low (24)
Status (positive or negative)	Negative	Negative
Reversibility	Not possible	Not possible
Irreplaceable loss of resources?	Yes	Yes
Can impacts be mitigated?	No	No

Mitigation:

None anticipated as the agricultural potential is low

Cumulative impacts: None

Residual impacts: None

Nature of impact: Soil erosion due to clearing vegetation, topsoil and stockpiling during construction

Due to the fact the establishment of the coal stockyard will involve permanent loss of the soil resource, it is recommended that the topsoil (approximately 300-400 mm) be removed and stored prior to construction. In this way, the soil will be available elsewhere at a later date for rehabilitation purposes. There is not a significant difference between the topsoil and

subsoil, so if some mixing occurs, it should not be significant.

Erodibility is not a problem in flat areas, such as the existing terrain, but if the stored topsoil was to be used for rehabilitation in sloping areas (for example on the sides of the ash dump), great care should be taken to ensure that erosion does not occur.

	Without mitigation	With mitigation
Extent	Low (1)	Low (1)
Duration	Permanent term (5)	Permanent term (5)
Magnitude	Minor (2)	Minor (2)
Probability	Probable (3)	Probable (3)
Significance	Low (24)	Low (24)
Status (positive or negative)	Negative	Negative
Reversibility	Not possible	Not possible
Irreplaceable loss of resources?	Yes	Yes
Can impacts be mitigated?	Yes	Yes

Mitigation:

During construction, stripped soil should be stockpiled. Soil erosion and hard setting of the stockpiled material may occur which can be mitigated by:

- » Ensuring that the slope of the stockpiled material is such that surface runoff is minimal;
- » Additions of stabilising agents such as organic material or vegetative cover;
- » Topsoil to be used for rehabilitation in sloping areas such as the sides of the ash dump
- » Placement of along slope measures (berms, logs, geotextiles etc.) to aid the process.

Soil should be stockpiled for a brief a period as possible, alternatively it can be used in the construction of berms, swales etc. to ensure that soil erosion does not cause major degradation of the surrounding land.

Cumulative impacts: None

Residual impacts: None

3. Potential impacts on Ecology

The destruction of Red Data species or areas suitable for said species represents a significant impact on the biodiversity of a region. PRECIS data from SANBI indicate a total of 305 plant species within the ¼ degree grid within which the proposed development site is located. The fact that only 47 (39.2%) of the species that were identified in the study area are listed on the PRECIS list clearly illustrate the low state of knowledge of the botanical diversity of this area in general, particularly when taking the relatively small size of the study area in relation to the ¼ degree grid into consideration.

Four red data flora species were listed within the relevant quarter degree square. None of these species were observed in the study area during the site investigation. Comparing results of the preliminary investigation and general information with the List of Protected Trees, the presence

of four (4) protected tree species within the proposed development site was confirmed i.e. *Acacia erioloba* (Camel thorn), *Adansonia digitata* (Baobab), *Boscia albitrunca* (Shepherd's tree) and *Combretum imberbe* (Leadwood). The removal of these trees would require a tree permit. Eskom is already in possession of a valid Tree Permit for the proposed development site (Appendix G4).

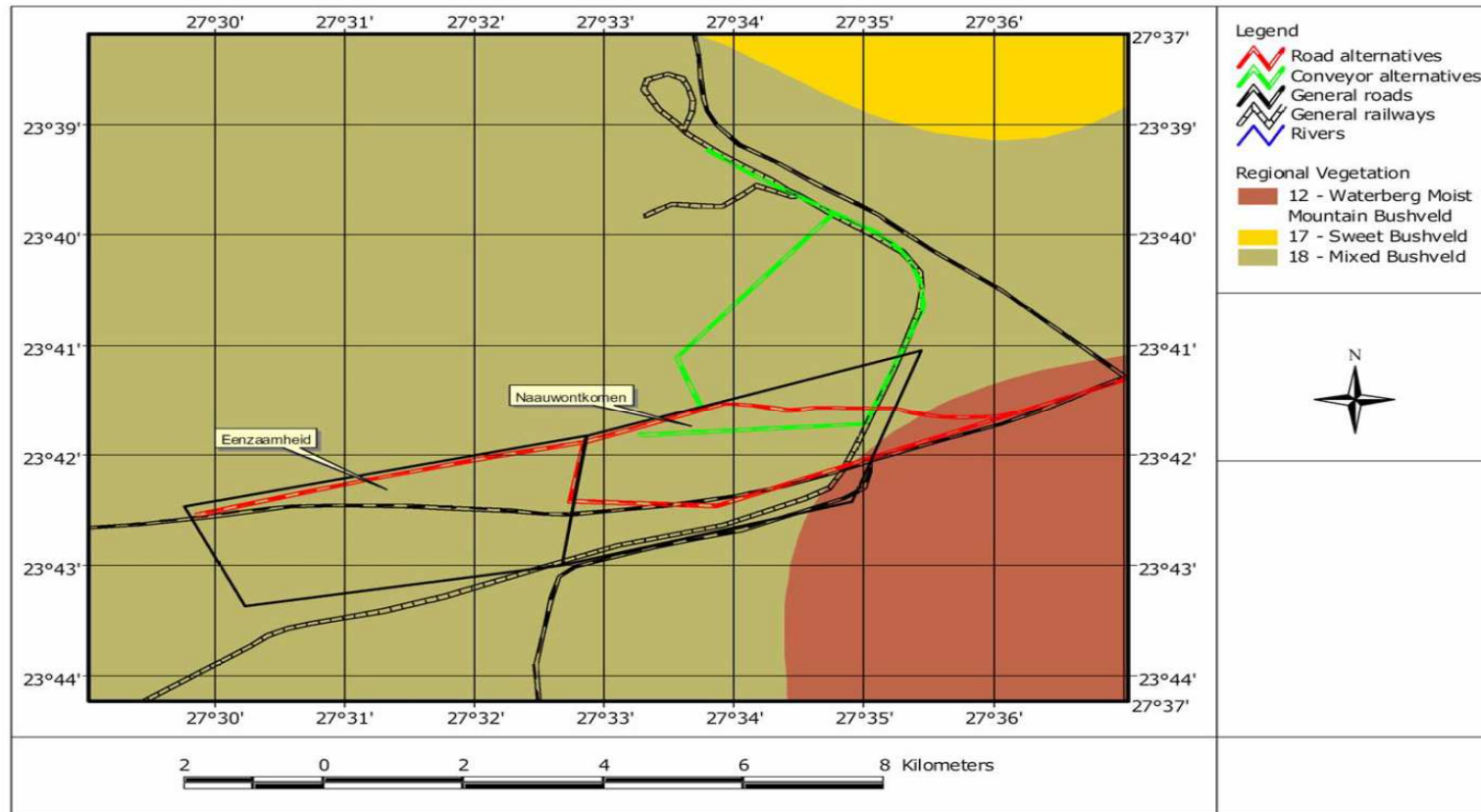


Figure 3: Map showing the vegetation type on Farm Eenzaamheid 678

Impact table summarising the significance of impacts on ecology

Nature: Destruction of threatened & protected flora		
	Without mitigation	With mitigation
Extent	Local (1)	Local (1)
Duration	Permanent (5)	Permanent (5)
Magnitude	Minor (2)	Minor (2)
Probability	Definite (5)	Definite (5)
Significance	Medium (40)	Medium (40)
Status (positive or negative)	Negative	Negative
Reversibility	Not possible	N/A
Irreplaceable loss of resources?	Yes	N/A
Can impacts be mitigated?	No	
Mitigation: None		
Cumulative impacts: No cumulative impacts.		
Residual impacts: No residual impacts are expected.		

4. Potential impacts to threatened fauna

No red data fauna species were recorded on the farm Eenzaamheid during the EIA undertaken for the power station. The suitability of Eenzaamheid, in terms of general red data fauna requirements is considered to be MEDIUM-LOW due to available habitat being considered moderately suited to the general habitat requirements of red data fauna species that could potentially occupy the area.

Extremely little variation is noted and long-term monitoring results are expected to reveal a species composition across the farm that does not vary significantly. Significant movement of fauna species between this and adjacent properties is expected with varying conditions (seasonal).

The savanna of South Africa includes numerous animal species; approximately 167 mammals (15% endemism), 532 birds (15% endemism), 161 reptiles (40% endemism), 57 amphibians (18% endemism) and an unknown number of invertebrates. Flagship species include the Starburst Horned Baboon Spider, ground Hornbill, Cape Griffon, Wild dog, Short-Eared Trident Bat and the White Rhinoceros (Knobel, 1999). The Baboon Spider has been recorded on site during the construction of the Medupi Power Station and there is therefore a possibility that this species could occur in the area proposed for the coal stockyard.

A total of 64 animals were observed within the boundaries of Eenzaamheid which include: 9 invertebrates; 3 reptiles; 4 frogs, 42 birds; and 6 mammals.

The previous ecology study that:

- » no Red Data invertebrates are listed for the study area;
- » the Giant Bullfrog is the only Red Data amphibian listed for the study area; no Red Data reptiles are listed for the study area;
- » twenty-nine Red Data birds are listed as potential inhabitants of the study area; and
- » thirty Red Data mammal species are listed for the study area.

Survey Results

- » The Bushveld Gerbil, *Tatera leucogaster*, was trapped on Naauwontkomein and is listed as Data Deficient. The general habitat description for this species is
- » sandy soils in a variety of habitat types.

No red data fauna species were observed on Eenzaamheid. Refer to Appendix G5: List of fauna on Eenzaamheid Farm.

Likely, impacts resulting from the proposed construction activity are expected to result in animal species migrating from this property to nearby areas that is suited to their breeding-, general habitat- or territorial requirements. Any remaining animals will be captured and transported to the Eskom owned Swartwater game farm.

Impact table summarising the significance of impacts on ecology

Nature: Loss of threatened faunal species		
	Without mitigation	With mitigation
Extent	Local (1)	Local (1)
Duration	Permanent (5)	Permanent (5)
Magnitude	Minor (2)	Minor (2)
Probability	Definite (5)	Definite (5)
Significance	Medium (40)	Medium (40)
Status (positive or negative)	Negative	Negative
Reversibility	Not possible	N/A
Irreplaceable loss of resources?	Yes	N/A
Can impacts be mitigated?	Yes	
Mitigation: <ul style="list-style-type: none"> • Minimise the development footprint as far as possible. • Ensure no disturbance occurs outside of the demarcated development footprint. • Obtain necessary permits to impact on protected and threatened plant and animal species. 		
Cumulative impacts: No cumulative impacts are expected.		

Residual impacts:

No residual impacts are expected

5. Potential Visual Impacts

Potential visual impact associated with the construction of the proposed coal stockyard relate to possible impacts to the surrounding landowners. However, due to the existing construction activities associated with the power station and associated infrastructure, this impact is expected to be of low significance.

Impact table summarising the significance of visual impacts

Nature of impact: Potential visual impact of construction on land owners in close proximity to the coal stock yard

	Without mitigation	With mitigation
Extent	Local (1)	Local (1)
Duration	Very short (1)	Very short (1)
Magnitude	Minor (2)	Minor (2)
Probability	Probable (3)	Improbable (2)
Significance	Low (12)	Low (8)
Status (positive or negative)	Negative	Negative
Reversibility	No	No
Irreplaceable loss of resources?	No	No
Can impacts be mitigated?	Yes	-

Mitigation:

- » As far as possible, reduce the construction period through careful logistical planning and productive implementation of resources.
- » Plan the placement of lay-down areas and temporary construction equipment camps (if required) in order to minimise vegetation clearing (i.e. in already disturbed areas) wherever possible.
- » Restrict the activities and movement of construction workers and vehicles to the immediate construction site and existing access roads.
- » Ensure that rubble, litter, and disused construction materials are appropriately stored (if not removed daily) and then disposed regularly at licensed waste facilities.
- » Reduce and control construction dust through the use of approved dust suppression techniques as and when required (i.e. whenever dust becomes apparent).
- » Rehabilitate all disturbed areas, construction areas, roads, slopes etc. immediately after the completion of construction works.

Cumulative impacts:

None.

Residual impacts:

None.

6. Potential impacts on the social environment

From a social perspective, there may be some positive impacts resulting from limited job opportunities and skills development for low- to semi-skilled jobs.

Impact tables summarising the significance of social impacts

Nature: Impacts on the social environment

	Without Mitigation	With Mitigation
Extent	Local (1)	Local (1)
Duration	Very Short (1)	Very short term (1)
Magnitude	Low (4)	Minor (3)
Probability	Probable(3)	Probable (3)
Significance	Low (18)	Low (15)
Status (positive or negative)	Positive	Positive
Reversibility	N/A	N/A
Irreplaceable loss of resources?	N/A	N/A
Can impacts be mitigated?	Yes	

Mitigation:

- » The use of local labour for low, where possible – semi skilled jobs should be maximised as far as possible.
- » Effective enforcement of traffic laws.

Cumulative impacts:

No cumulative impacts are expected.

Residual impacts:

No residual impacts are expected

Nature: Intrusion Impacts

The construction phase will comprise a series of different activities including land clearing, topsoil removal, material loading and hauling, stockpiling, grading, bulldozing, compaction, (etc.). Each of these operations has its own duration and potential for dust and noise generation. This has the potential to impact on surrounding landowners for limited periods of time. However, in relation to the existing impact associated with the construction of the power station and associated infrastructure, impacts on this regard are expected to be of low significance.

	Without Mitigation	With Mitigation
Extent	Local (1)	Local (1)
Duration	Short (1)	Short (2)
Magnitude	Minor (2)	Minor (2)
Probability	Probable (3)	Probable (3)
Significance	Low (12)	Low (12)
Status (positive or negative)	Positive	Positive
Reversibility	N/A	N/A

Irreplaceable loss of resources?	N/A	N/A
Can impacts be mitigated?	Yes	
Mitigation: » Noise impact can be reduced by ensuring that all construction vehicles and equipment should be kept in good working order and noisy construction is within reasonable hours during the day and early evenings.		
Cumulative impacts: No cumulative impacts are expected.		
Residual impacts: No residual impacts are expected		

No Go Alternative

The 'Do-Nothing' alternative is the option of not establishing the coal stock yard. Should this alternative be selected Eskom will not have a site for the stockpiling of the coal from its supplier. This would have financial implications as penalties will be payable if the coal cannot be accepted at the date agreed to. The proposed site is an authorised ash dump site and therefore construction on the site will continue regardless of whether the coal stockyard is established or not.

2.3 IMPACTS THAT MAY RESULT FROM THE OPERATIONAL PHASE

Alternative (preferred alternative)

Potential impacts associated with the operation of the coal stock yard are discussed below.

1. Potential impacts on the surface and groundwater

The proposed development site is underlain by Waterberg Group sandstone. Approximately 3 m of permeable sandy soil covers \pm 4 m of weathered sandstone. Red hard competent sandstone is intersected below the shallow weathering. The majority of the 26 monitoring boreholes drilled and constructed at the power station and the ash dump were dry. These sediments are recognised to be poor aquifers with water moving through the rocks at very low rates. These rates are very low due to the low permeability of the rocks and the very low regional groundwater gradients.

The possible source of contamination or infrastructure that may impact on the groundwater or surface water from the coal stock yard is potential acid generation. Seepage from the wet coal can recharge the groundwater and Acid mine drainage (AMD) can occur.

- » Areas of artificial recharge, which include the raw water dam and the ash dump toe dam.
- » Areas of artificial recharge with poor quality water, which are recognised as the sewage plant and dams, the evaporation dams, and the ash dump (including brine deposits from the de-ionised water system).
- » Recharge and contamination from the recovery / surface water run-off dams, through

seepage, spillage, and overflow.

Impact tables summarising the significance of impacts on surface and groundwater

Nature: Surface or Ground water contamination		
	Without mitigation	With mitigation
Extent	Site (1)	Site (1)
Duration	Long term (4)	Long term (4)
Magnitude	Minor (2)	Minor (2)
Probability	Improbably (2)	Improbable (2)
Significance	Low (14)	Low (14)
Status (positive or negative)	Negative	
Reversibility	No	-
Irreplaceable loss of resources?	No	-
Can impacts be mitigated?	Yes	
Mitigation: » The coal stockyard should be managed by constructing a clay base, installing a liner; separating clean and dirty runoff; minimising coal stock piles and size of yard; installing and maintain surface water controls; sloping topography to prevent ponding; and monitoring groundwater levels and quality. These measures are already proposed for the site. The quality of groundwater could be managed by: » Monitoring groundwater quality and water levels; and » Monitoring neighbouring boreholes		
Cumulative impacts: No cumulative impacts are expected.		
Residual impacts: No residual impacts are expected.		

2. Potential impacts on air quality

The proposed coal stockyard will be established close to the Medupi Power Station and Matimba Power Station. Given that the project will be associated with low level emissions (e.g. from mining and ashing operations in the area) and elevated emissions (i.e. from the power station stacks), the proposed project has the potential of impacting on receptors in the near and medium fields. Ward numbers 2, 3 and 4 of the Lephalale Local Municipality are the most sensitive to impacts related to atmospheric emissions. Wards 1 and 5 may also be affected depending on the spatial extent of impacts.

As at the existing Matimba Power Station, sources of atmospheric emission associated with the proposed power station will include stack emissions in addition to fugitive dust releases arising as a result of coal and ash handling, wind entrainment from the ash dump, and recovery and use of topsoil material. These issues are already addressed within the application for the Air Emissions

License for the power station. Construction of the coal stockyard will require an amendment to this air emissions license as the emissions from coal storage within the site will most likely increase.

Nature: Impacts on Air Pollution		
	Without Mitigation	With Mitigation
Extent	Local(1)	Local (1)
Duration	Very short (1)	Short duration (2)
Magnitude	Minor (2)	Minor (2)
Probability	Probable (3)	Probable (3)
Significance	Low (12)	Low (15)
Status (positive or negative)	Positive	Positive
Reversibility	N/A	N/A
Irreplaceable loss of resources?	N/A	N/A
Can impacts be mitigated?	No	
Mitigation: None		
Cumulative impacts: No cumulative impacts are expected.		
Residual impacts: No residual impacts are expected		

3. Potential visual impacts

The coal stockyard (expected to be up to 30 m in height) is not expected to have a regional or long distance visual impact due to the fact that it is either not visible or not recognisable from great distances. It does, however, have the potential to create short distance visual impacts due to its close proximity to secondary roads in the area, as well as to adjacent landowners. However, in relation to the development of the power station and associated infrastructure (such as the ash dump), no additional visual impact is expected to be associated with the proposed coal stockyard.

Nature: Visual impacts on local roads and surrounding landowners		
	Without mitigation	With mitigation
Extent	Local (1)	Local (1)
Duration	Long Term (4)	Long Term (4)
Magnitude	Low (2)	Low (2)
Probability	Improbable (1)	Improbable (1)
Significance	Low (8)	Low (8)
Status (positive or negative)	Negative	Negative
Reversibility	No	No
Irreplaceable loss of resources?	No	No
Can impacts be mitigated?	Yes	Yes

Mitigation: » Timely maintenance and the general surrounds of the property (gardens, access roads, etc.) can prevent the visual impact of degradation and perceived poor management.	
Cumulative impacts: No cumulative impacts are expected.	
Residual impacts: No residual impacts are expected.	

No Go Alternative

The 'Do-Nothing' alternative is the option of not establishing the coal stock yard. Should this alternative be selected Eskom will not have a site for the stockpiling of the coal from its supplier. This would have financial implications as penalties will be payable if the coal cannot be accepted at the date agreed to. The proposed site is an authorised ash dump site and therefore construction on the site will continue regardless of whether the coal stockyard is established or not.

2.4 IMPACTS THAT MAY RESULT FROM THE DECOMMISSIONING AND CLOSURE PHASE

Alternative (preferred alternative)

After the lifespan of the coal stockyard is completed, the site will be used as an ash dump. The coal stockyard will therefore not be decommissioned.

No Go Alternative

The 'Do-Nothing' alternative is the option of not decommissioning the coal stock yard at the end of its life span. Should this option be implemented, there will be subsequent impacts on the operation of the power station as this area is earmarked for ash disposal. This option is therefore not favoured.

3. ENVIRONMENTAL IMPACT STATEMENT

Taking the assessment of potential impacts into account, please provide an environmental impact statement that summarises the impact that the proposed activity and its alternatives may have on the environment after the management and mitigation of impacts have been taken into account, with specific reference to types of impact, duration of impacts, likelihood of potential impacts actually occurring and the significance of impacts.

Alternative A (preferred alternative)

This section provides a summary of the assessment conclusions for the proposed development site. In doing so, it draws on the information gathered as part of the Basic Assessment process and the knowledge gained by the environmental consultants during the course of the process and presents an informed opinion of the environmental impacts associated with the proposed project.

- » The proposed development site falls within the approved ash dump area associated with the Medupi Power Station. The impacts of the proposed coal stockyard will not differ from those expected to be associated with the ash dump.
- » The overall impact on **ecology** is likely to be of **medium significance**. The vegetation in the study area is the same as the regional area. Aspects that will affect the ecological sensitivity status of the habitat units include the confirmed presence of protected tree species of the medium floristic and faunal status of the study area and adequate connectivity to areas of adjacent natural habitat (low fragmentation factor). Eskom has already obtained the necessary tree permits for this property. The Baboon Spider has been recorded on site during the construction of the Medupi Power Station and there is therefore a possibility that this species could occur in the area proposed for the coal stockyard. Precautionary measure should therefore be taken in this regard in order to determine whether any suitable habitat for this species exists. As this species is listed as a species of conservation concern in terms of the Limpopo Biodiversity Act, a biodiversity permit must be obtained from the Limpopo Department of Economic Development, Environment and Tourism to impact on this species.
- » The suitability of Eenzaamheid, in terms of general red data **fauna** requirements, is considered **Medium-Low** due to available habitat being considered moderately suited to the general habitat requirements of red data fauna species that could potentially occupy the area. Impacts of some significance that should be taken into consideration include:
 - » destruction of natural habitat; and
 - » destruction of protected tree species and associated habitat.
- » The overall **heritage** impact is likely to be of **low significance** as no sites, features or objects of cultural heritage significance were identified in the study area. However, should any artefacts be uncovered during the construction period, the necessary permits will need to be obtained.
- » The overall impact on **soil and agricultural potential** is expected to be low as a result of the low agricultural potential of the soils on the site due to their sandy nature, increased susceptibility to wind erosion and excessively free drainage.
- » The overall impact on ground water contamination potential is expected to be of **low significance**. The proposed coal stockyard site will include an appropriate liner. This would prevent the contamination of the ground water. The liner system also consists of a Leachate Collection system and Leak detection system. By monitoring these two systems, any source of contamination would be timeously identified. In addition, the coal stockyard

would be managed by constructing a clay base, separating clean and dirty runoff; installing and maintain surface water controls; sloping topography to prevent ponding; and monitoring groundwater levels and quality.

- » The overall **social** impact in terms of positive and negative impacts is likely to be of a **low significance**. Due to the type of the proposed development, most of the operations on site would entail mechanical operations and thus no permanent employment is envisaged.
- » The overall **visual** impacts for the coal stockyard are of low significance and not expected to have a regional or long distance visual impact due to the fact that it is either not visible or not recognisable from great distances.
- » The overall **air** impacts are of low significance. The coal stock yard is located near the Medupi and Matimba Power stations. The effects from the coal stock yard are expected to be minor.

Based on the findings of the studies undertaken, in terms of environmental constraints identified through the Environmental Basic Assessment process, no environmental fatal flaws were identified to be associated with the establishment of the proposed establishment of the coal stockyard on the Medupi Ash Dump and associated infrastructure. It is therefore the recommendation of the project team that the proposed activity be authorised.

No-go alternative (compulsory)

The 'Do-Nothing' alternative is the option of not establishing the coal stock yard. Should this alternative be selected Eskom will not have a site for the stockpiling of the coal from Exxaro's Grootegeeluk mine. This would have financial implications as penalties will be payable if the coal cannot be accepted at the date agreed to. The proposed site is an authorised ash dump site and therefore construction on the site will continue regardless of whether the coal stockyard is established or not.

SECTION E. RECOMMENDATION OF PRACTITIONER

Is the information contained in this report and the documentation attached hereto sufficient to make a decision in respect of the activity applied for (in the view of the environmental assessment practitioner)?

YES
✓

If "NO," indicate the aspects that should be assessed further as part of a Scoping and EIA process before a decision can be made (list the aspects that require further assessment):

N/A

If "YES," please list any recommended conditions, including mitigation measures that should be considered for inclusion in any authorisation that may be granted by the competent authority in respect of the application:

There are no fatal flaws associated with the establishment of the establishment of the coal stockyard on the ash dump.

The construction and operation of the coal stockyard should be implemented according to the approved EMP for the Medupi Power Station, as well as the addendum to the EMP attached to this Basic Assessment Report. This will ensure adequate mitigation and management of potential impacts associated with construction and operation activities.

Relevant conditions to be adhered to include:

Design and Construction Phase:

The following mitigation and management measures should be implemented during the construction phase in order to minimise potential environmental impacts:

- » The development of the coal stockyard should be monitored as part of the existing environmental monitoring system for the Medupi Power Station construction.
- » Ensure that the slope of the stockpiled coal is such that surface runoff is minimal.
- » Prevent impacts on any surface water as a result of hazardous materials, contamination, unnecessary crossing by vehicles or personnel, extraction, drinking or other human uses, construction and maintenance activities.
- » No animal may not be hunted, trapped, or killed for any purpose whatsoever.
- » Develop emergency maintenance operational plan to deal with any event of contamination, pollution, or spillages.
- » Compile and implementation a storm water management plan.

Operation Phase:

The following mitigation and management measures should be implemented during the operation phase in order to minimise potential environmental impacts:

- » Maintenance of erosion control measures (i.e. berms)
- » Development and implementation of a storm water management plan.

Is an EMPR attached?

YES
✓

The EMPR is attached as **Appendix F**.