



## environmental affairs

Department:  
Environmental Affairs  
REPUBLIC OF SOUTH AFRICA


File Reference Number:  
NEAS Reference Number:  
Date Received:

(For official use only)

12/12/20/ or 12/9/11/L

DEAT/

Application for integrated environmental authorisation and waste management licence in terms of the-

- (1) National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended and the Environmental Impact Assessment Regulations, 2010; and
- (2) National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) and Government Notice 718 of 2009.

### PROJECT TITLE

**Environmental Impact Assessment and Waste Management License Application for Continued Ashing at the Existing Ash Disposal Facilities, at Tutuka Power Station, Mpumalanga Province**

## PART A: INFORMATION AND APPLICATION PROCESS

### 1. DEFINITIONS

Definitions in this form are as per the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA), the Environmental Impact Assessment ("EIA") Regulations, 2010, the National Environmental Management: Waste Act, 1998 (Act No. 59 of 2008) ("NEMWA") and the Schedule contained in Government Notice 718, published on 3 July 2009 in terms of section 19 of NEMWA.

### 2. APPLICABILITY OF INTEGRATED ENVIRONMENTAL AUTHORISATION PROCESS

The integrated environmental authorisation process only apply in instances where the **Minister** is both the-

- (a) competent authority for the environmental authorisation applied for in terms of NEMA and the EIA Regulations, 2010; and
- (b) the licencing authority for the waste management licence in terms of NEMWA.

Kindly refer to paragraph 3.2 of this part of the application to determine in which instances the Minister would be the competent authority in terms of NEMA and the licencing authority in terms of NEMWA.

### **3. APPLICATION PROCESS EXPLAINED:**

#### **3.1 Integrated environmental authorisation process:**

3.1.1 The environmental authorisation process prescribed for listed activities under Listing Notices 1, 2 and 3 published in *Government Gazette* Numbers R544, R545 and R546 respectively and the waste licensing process for listed activities contained in the Schedule in Government Notice 718, 2009 published in terms of section 19 of NEMWA are as defined in the Environmental Impact Assessment (EIA) Regulations made under section 24(5) of the National Environmental Management Act, 2008 (Act No. 107 of 1998) ("NEMA").

3.1.2 This integrated application form is the official form in terms of regulation 12(2)(a) of the EIA Regulations, 2010 and must accompany every integrated environmental authorization application pertaining to-

- listed activities in terms of NEMA; and
- waste activities in terms of NEMWA.

#### **3.2 Competent Authority (Where to submit applications)**

3.2.1 The Minister of Water and Environmental Affairs is the-

- competent authority in respect of the activities listed in Listing Notices 1, 2 and 3, published in *Government Gazette* numbers R544, R545, and R546 respectively, in terms of NEMA if the activity-
  - (a) has implications for international environmental commitments or relations;
  - (b) will take place within an area protected by means of an international environmental instrument, other than-
    - (i) any area falling within the sea-shore or within 150 meters seawards from the high-water mark, whichever is the greater;
    - (ii) a conservancy;
    - (iii) a protected natural environment;
    - (iv) a proclaimed private nature reserve;
    - (v) a natural heritage site; and
    - (vi) the buffer zone or transitional area of a world heritage site;
  - (c) has a development footprint that falls within the boundaries of more than one province or traverses international boundaries;
  - (d) Is undertaken, or is to be undertaken by-
    - (i) A national department;
    - (ii) A provincial department responsible for environmental affairs or any other organ of state performing a regulatory function and reporting to the MEC; or
    - (iii) A statutory body, excluding any municipality, performing an exclusive competence of the national sphere of government; or
  - (e) Will take place within a national proclaimed protected area or other conservation area under control of a national authority.
- licencing authority in respect of all activities listed in both categories of the Schedule contained in Government Notice 718, 2009 published in terms of section 19 of NEMWA where –

- (a) Unless otherwise indicated by the Minister by notice in the *Gazette*, the waste management activity involves the establishment, operation, cessation or decommissioning of a facility at which hazardous waste has been or is to be stored, treated or disposed of;
- (b) The waste management activity involves obligations in terms of an international obligation, including the importation or exportation of hazardous waste;
- (c) The waste management activity is to be undertaken by-
  - (i) A national department;
  - (ii) A provincial department responsible for environmental affairs; or
  - (iii) A statutory body, excluding any municipality, performing an exclusive competence of the national sphere of government;
- (d) The waste management activity will affect more than one province or traverse international boundaries; or
- (e) Two or more waste management activities are to be undertaken at the same facility and the Minister is the licencing authority for any of those activities.

However, despite the above-mentioned legislative provisions, the Minister and an MEC may agree that an application for a waste management activity or an environmental authorisation in respect of the above-mentioned activities, where the Minister is the competent/licencing authority, may be dealt with by the relevant MEC within whose province the activity(ies) will take place. Similarly the Minister and the MEC may agree that an application for an environmental authorisation or a waste management activity where the MEC has been identified as the competent/licencing authority, may be dealt with by the Minister. [Section 24C(3) of NEMA and section 43(3) of NEMWA]

The integrated application for environmental authorisation must be submitted by lodging an application with the National Department of Environmental Affairs. The application must be marked for the attention of:

The Director: Environmental Impact Evaluation  
Private Bag X447  
Pretoria 0001  
Tel: 012 310 3230



### 3.3 Making an Application

- 3.3.1 This application form is current as of 1 September 2010. It is the responsibility of the applicant to ascertain whether subsequent versions of the form have been published or produced by the competent authority. It is the applicant's responsibility to download the current version of the application form from the website of the Department at <http://www.deat.gov.za>.
- 3.3.2 The application must be typed within the spaces provided in the form. The sizes of the spaces provided are not necessarily indicative of the amount of information to be provided. Spaces are provided in tabular format and will extend automatically when each space is filled with typing.
- 3.3.3 The applicant must clearly mark confidential sections of the information submitted in the application form and supporting documents. Unless protected by law, all information filled in on this application will become public information on receipt by the competent authority. Any interested and affected party should be provided with the information contained in this application on request, during any stage of the application process.
- 3.3.4 The applicant must fill in all relevant sections of this form. Incomplete applications will not be processed. The applicant will be notified of the missing information in the acknowledgement letter that will be sent within 14 days of receipt of the application.
- 3.3.5 Incomplete applications may be returned to the applicant for revision.
- 3.3.6 Sections in the form that do not apply to the applicant must be marked "not applicable". However, the use of the phrase "not applicable" in the form must be done with circumspection. Should it be done in respect of material information required by the competent authority for assessing the application, it may result in the rejection of the application as provided for in the Regulations.
- 3.3.7 Where applicable **black out** the boxes that are not applicable in the form.
- 3.3.8 This application form (together with four hard copies of this application form), must be handed in at the offices of the relevant competent authority as determined by the relevant Acts and Regulations and as indicated in this application form. All application forms must be signed as stipulated in the form. Applications that are not signed or completed accordingly will not be considered.
- 3.3.9 No faxed or e-mailed applications will be accepted.
- 3.3.10 There is currently no prescribed fee.

### 3.4 Appointment of an EAP

- The applicant must appoint an EAP in terms of EIA Regulations, 2010;
- The EAP must comply with general requirements as given in EIA regulations, 2010; and
- The EAP may be disqualified in terms of EIA Regulations, 2010.



### 3.5 Criteria for determining whether basic assessment or scoping is to be applied to applications

#### 3.5.1 NEMA activities

- (a) Basic assessment must be applied to an application if the authorisation applied for is in respect of an activity listed in Listing Notices 1 and/or 3 published in Government Gazette Numbers R544 and R546, 2010 respectively and which must follow the process described in sections 21-25 of the EIA Regulations, 2010; and
- (b) Scoping and Environmental Impact Reporting Process ("S&EIR") must be applied to an application if the authorisation applied for is in respect of an activity listed in Listing Notice 2 published in Government Gazette Number R545, 2010 and which must follow the process described in sections 26-35 of the EIA Regulations, 2010.

#### 3.5.2 NEMWA activities

- (a) Basic assessment, in terms of sections 21-25 of the EIA Regulations, 2010, must be applied to an application if the authorisation applied for is in respect of an activity listed in Category A of the Schedule contained in Government Notice 718, published on 3 July 2009, in terms of section 19 of NEMWA; and
- (b) S&EIR, in terms of sections 26-35 of the EIA Regulations, 2010, must be applied to an application if the authorisation applied for is in respect of an activity Category B of the Schedule contained in Government Notice 718, published on 3 July 2009, in terms of section 19 of NEMWA.

#### 3.5.3 Combination of NEMA and NEMWA activities

Should any of the NEMA or NEMWA activities applied for require the application of the S&EIR process, the S&EIR process will be applied to this application for integrated environmental authorisation.

Queries must be addressed to the contact hereunder:

#### Departmental Details

**Postal address:**

Department of Environmental Affairs  
Attention: Director: Environmental Impact Evaluation  
Private Bag X447  
Pretoria  
0001

**Physical address:**

Department of Environmental Affairs  
Fedsure Forum Building (corner of Pretorius and Van der Walt Streets)  
2<sup>nd</sup> Floor North Tower  
315 Pretorius Street  
Pretoria  
0002

Queries should be directed to the Directorate: Environmental Impact Evaluation at:

Tel: 012-310-3290  
Fax: 012-320-7539

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## PART B: GENERAL

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### 1. DESCRIPTION OF PROJECT

The entire project will entail the following (full detail of the project can also be appended):

Tutuka Power Station, in the Mpumalanga Province, envisages the continuation of dry ash disposal (i.e. dry ashing) over Eskom owned land. Such land was purchased before the commencement of Environmental laws, the Environment Conservation Act, in particular. Part of its planning processes, Eskom developed designs which were approved internally ~ these designs showed the proposed ashing lands. With the promulgation of the environmental laws, and the National Environmental Management Waste Act, Act 59 of 2008, in particular, Eskom would like to align its continued ashing activities with the requirements of the waste licensing processes.

The proposed continuous development is an ash disposal site with the following specifications:

- Capacity of airspace of 353,1 million m<sup>3</sup> (Existing and remaining); and
- Ground footprint of 2500 Ha (Existing & Remaining ash dump & pollution control canals)

This ash disposal facility shall be able to accommodate the ashing requirements of the power station for the next 44 years, from 2012 to 2055, which is the life of the station. The proposed 759 Ha portion, of farms Rouxland 348 IS (Portions 1, 25, 27 and 28), Mooimeisjesfontein 376 IS (Portions 4 and 2), Dwars in de Weg 350 IS (Portions 2, 5, 6, and 8) and Spioenkop 375 IS (Portions 1, 2 and remainder), is located on the South Eastern portion of the Eskom, Tutuka Power Station ashing lands site boundary. The continued portion of ash dump will continue from the existing ash dump, all on Eskom's land within the originally planned ashing area.

The need for this application is to allow station to continue ashing in an environmentally responsible way for life of station.

Purpose of application:

The purpose of the application is to, on behalf of the applicant – Eskom Holdings SOC Limited, apply for an environmental authorisation for the relevant listed activities under both the National Environmental Management Act (Act 107 of 1998) and the National Environmental Management Waste Act (Act 59 of 2008), as well as to apply for a Waste Management License, due to the fact that the ash disposal facility is deemed a waste disposal facility.

### 2. FLOW CHART OF OPERATIONS

Please provide a brief description of the activities and operations at the site. Provide a flow chart of the operation showing all inputs and outputs of the process. Give particulars of the source, location, nature, composition and quantity of emission to the atmosphere, surface water, sewer, and ground-water including noise emissions. Solid waste must be in tons and specify units for liquids and gases.



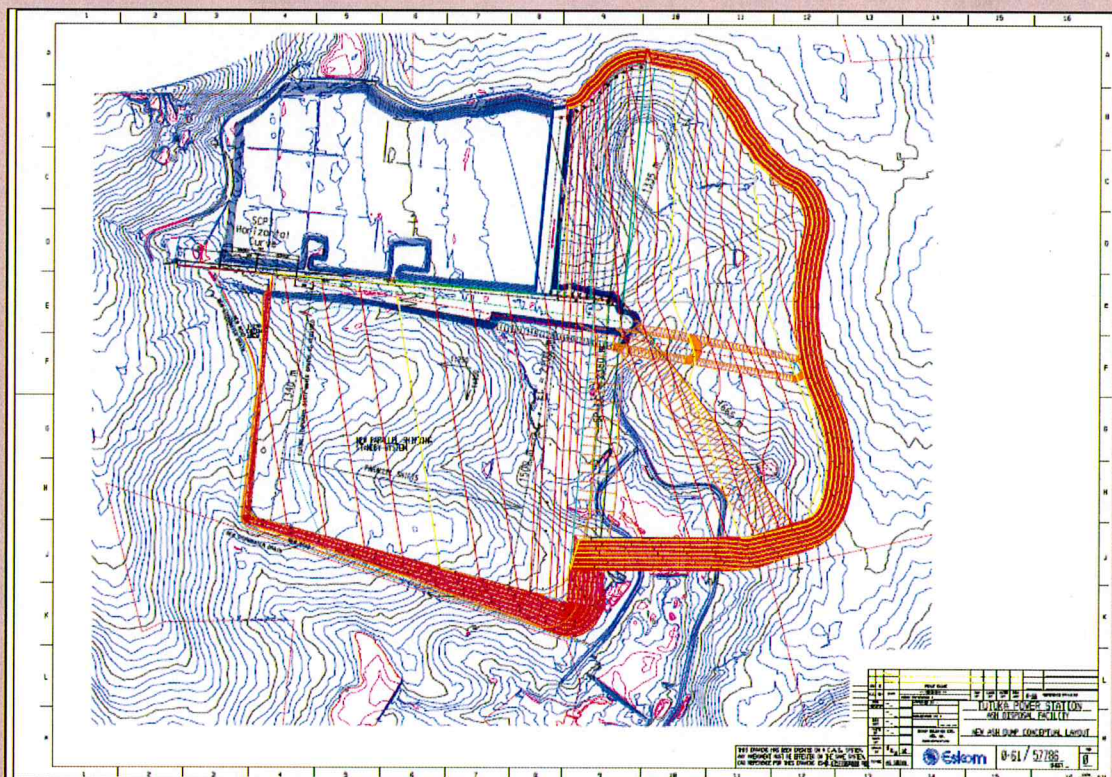
Tutuka Power Station, a coal fired power generation facility commissioned between 1985 – 1990, is located 25 km North of Standerton in the province of Mpumalanga. Tutuka Power Station currently disposes of burnt boiler ash in a dry (20% moisture content) format by means of conveyors, spreader and a stacker system from the station terrace to the Ash Disposal site. The ash disposal site covers an area of 2500 ha and is located approximately 4,5 km east of the station terrace.

The waste product is deposited onto the dump by means of a stacker, which handles some 85% of the total ash whilst the remaining 15% is placed by a standby spreader system. Figure 1 below illustrates the ash dump layout as currently constructed and outlines the footprint of the proposed future extent of the facility.

As the ash dump progresses from west to east, the two extendible conveyors will be extended to its final lengths of 4000 m each. The ash dump is built out in two layers. The front stack is deposited by the stacker and spreader to a height of approximately 45 m. The ash is bulldozed out to a slope of 1:3 for dust suppression and rehabilitation purposes. The stacker then moves around the head – end of the shiftable conveyor to dump another 10 meters high back stack.

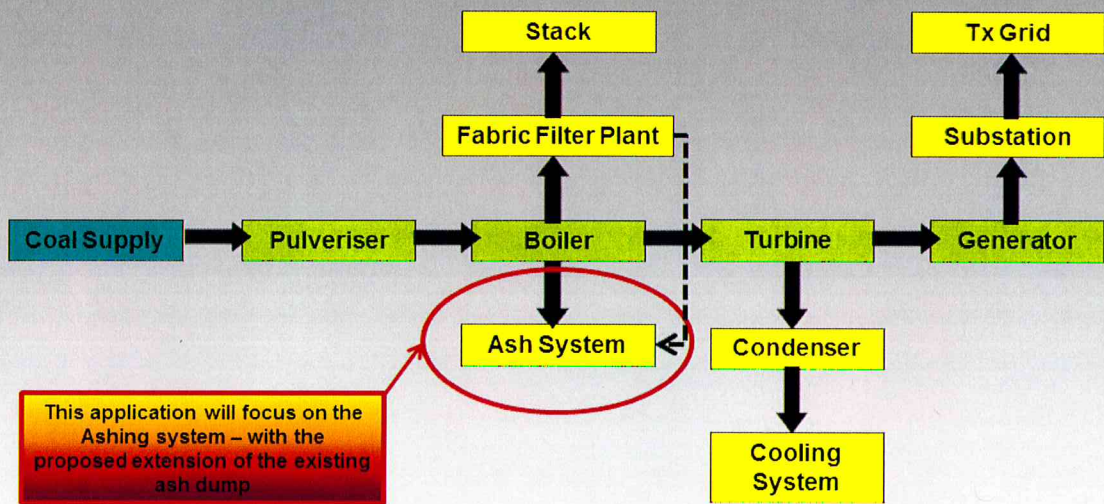
As the dump advances, the topsoil is stripped ahead of the dump and is taken by truck and placed on top of the final dump height. Grass is then planted in this top soil.

The ash dump facility has the required dirty and clean water channels and the clean storm water flows to the north and south clean water dams. The dirty water flows to the south settling dam and then to the south dirty water dam.

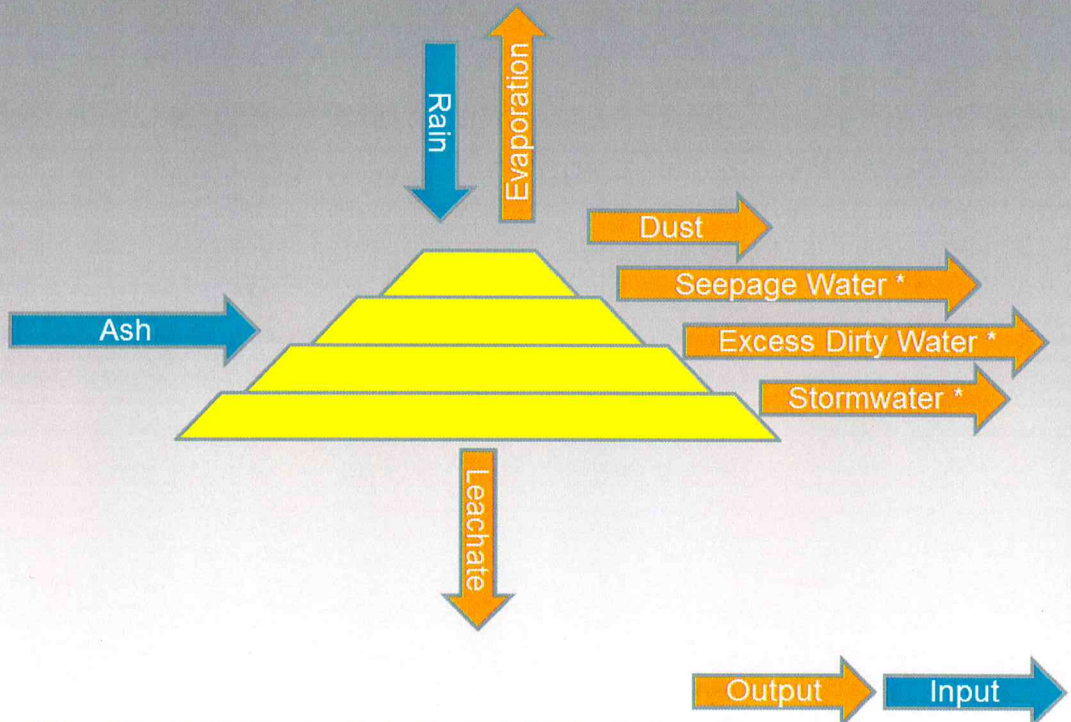




### Tutuka Power Station - Process Flow Diagram



### Tutuka Power Station Ashing System – Simplified Inputs and Outputs Diagram



\* Excess dirty water is discharged into the Ash Water Return Dams while seepage water and stormwater is discharged into the Seepage water dam



### 3. BACKGROUND INFORMATION

Project applicant:	Eskom Holdings SOC Limited		
Trading name (if any):	As Above		
Contact person:	Deidre Herbst		
Physical address:	Megawatt Park, Maxwell Drive, Sunninghill, Sandton		
Postal address:	PO Box 1091		
Postal code:	2000	Cell:	083 660 1147
Telephone:	011 800 3501	Fax:	086 660 6092
E-mail:	deidre.herbst@eskom.co.za		

Landowner:	Eskom Holdings Limited (Tutuka Power Station)		
Contact person:	Mr Ryno Lacock (Power Station Manager)		
Postal address:	Private Bag X2016, Standerton		
Postal code:	2430	Cell:	
Telephone:	017 749-5700	Fax:	017 749-5736
E-mail:	LacockR@eskom.co.za		

In instances where there is more than one landowner, please attach a list of landowners with their contact details to this application.

Ownership of the property (mark only one with an X)

Property owned by applicant (100% Share value)	X	Property leased by applicant	
Property owned by applicant (Share value less than 100%)		The property is communal land	

Local authority in whose jurisdiction the proposed activity will fall:	Lekwa Local Municipality		
Nearest town or districts:	Standerton		
Contact person:	Mr. S.Z. Luwaca (Municipal Manager)		
Postal address:	P O Box 66, Standerton		
Postal code:	2430	Cell:	
Telephone:	(017) 712 9600	Fax:	(017) 712 6808
E-mail:			

In instances where there is more than one local authority involved, please attach a list of local authorities with their contact details to this application.

Please note that a complete list of all organs or state and or any other applicable authority with their contact details must be appended to this application.

Property description/physical address:

**Eskom owned land:**

- Pretorius Vley 374 IS (Portions 2, 4, 10, 11)
- Mooimeisjesfontein 376 IS (Portions 2 and 4)
- Rouxland 348 IS (Portions 1, 25, 27 and 28)
- Dwars in de weg 350 IS (Portions 2, 5, 6 and 8)
- Spioen Kop 375 IS (Portions 1, 2 and Remainder)

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

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

**Current land-use where the site is situated:**

- Industrial
- Agriculture
- Residential
- Forestry
- Wetlands
- Open spaces



- Recreation
- Commercial
- Mining & quarrying
- Wilderness areas
- Nature area



Other current land-use.....

Current land-use zoning:

**Agricultural**

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?  
Must a building plan be submitted to the local authority?

<b>Unsure as yet</b>
<b>Unsure as yet</b>

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 accurate 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).



**4. SITE IDENTIFICATION AND LINKAGE, LOCATION AND LANDUSE**

4.1 Please indicate all the Surveyor-general 21 digit site (erf/farm/portion) reference numbers for all sites (including portions of sites) that are part of the application.

T	0	I	S	0	0	0	0	0	0	0	0	3	7	4	0	0	0	0	0
T	0	I	S	0	0	0	0	0	0	0	0	3	7	4	0	0	0	0	2
T	0	I	S	0	0	0	0	0	0	0	0	3	7	4	0	0	0	0	4
T	0	I	S	0	0	0	0	0	0	0	0	3	7	4	0	0	0	1	1
T	0	I	S	0	0	0	0	0	0	0	0	3	7	4	0	0	0	1	0
T	0	I	S	0	0	0	0	0	0	0	0	3	7	6	0	0	0	0	0
T	0	I	S	0	0	0	0	0	0	0	0	3	7	6	0	0	0	0	4
T	0	I	S	0	0	0	0	0	0	0	0	3	7	6	0	0	0	0	2
T	0	I	S	0	0	0	0	0	0	0	0	3	4	8	0	0	0	0	0
T	0	I	S	0	0	0	0	0	0	0	0	3	4	8	0	0	0	0	1
T	0	I	S	0	0	0	0	0	0	0	0	3	4	8	0	0	0	2	5
T	0	I	S	0	0	0	0	0	0	0	0	3	4	8	0	0	0	2	7
T	0	I	S	0	0	0	0	0	0	0	0	3	4	8	0	0	0	2	8
T	0	I	S	0	0	0	0	0	0	0	0	3	5	0	0	0	0	0	0
T	0	I	S	0	0	0	0	0	0	0	0	3	5	0	0	0	0	0	5
T	0	I	S	0	0	0	0	0	0	0	0	3	5	0	0	0	0	0	2
T	0	I	S	0	0	0	0	0	0	0	0	3	5	0	0	0	0	0	6
T	0	I	S	0	0	0	0	0	0	0	0	3	5	0	0	0	0	0	8
T	0	I	S	0	0	0	0	0	0	0	0	3	7	5	0	0	0	0	0
T	0	I	S	0	0	0	0	0	0	0	0	3	7	5	0	0	0	0	1
T	0	I	S	0	0	0	0	0	0	0	0	3	7	5	0	0	0	0	2

**LEGEND:**

- 1. Refers to the Surveyor's-General Office
- 2. Major Code (Registration Division)
- 3. Minor code
- 4. Property No (i.e. Farm No./Erf No./Holding Area No./Scheme No.)
- 5. Portion Number

(if there are more that 6, please attach a list with the rest of the numbers)  
 (These numbers will be used to link various different applications, authorisations, permits etc. that may be connected to a specific site)

4.2 If the property type is not surveyed, complete the following:

Full name of leader of village, community or tribal authority  
 Local Authority  
 Magisterial District  
 Tribal Authority/Council





**PART C: LISTED ACTIVITIES APPLIED FOR IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 AND THE ENVIRONMENTAL IMPACT REGULATIONS, 2010**

**1. ACTIVITIES APPLIED FOR TO BE AUTHORISED**

For an application for authorisation that involves more than one listed or specified activity that, together, make up one development proposal, all the listed activities pertaining to this application must be indicated.

Indicate the number and date of the relevant notice:	Activity No (s) (in terms of the relevant or notice) :	Describe each listed activity as per the detailed project description (and not as per wording of the relevant Government Notice):
No. R. 544 August 2010	9	The construction of facilities or infrastructure exceeding 1000 meters in length for the bulk transportation of water, sewage or storm water (i) with an internal diameter of 0.36 meters or more or (ii) with a peak throughput of 120 litres per second or more.
	11	The construction of 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
	18	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 a watercourse
	22	The construction of a road outside urban areas, with a reserve wider than 13,5 meters, or where no reserve exists where the road is wider than 8 meters.
	24	The transformation of land bigger than 1000 square metres in size, to residential, retail, commercial, industrial or institutional use, where, at the time of the coming into effect of this Schedule or thereafter such land was zoned open space, conservation or had an equivalent zoning.
	28	The expansion of or changes to existing facilities for any process or activity where such expansion or changes to will result in the need for a permit or license in terms of national or provincial legislation governing the release of emissions or pollution, excluding where the facility, process or activity is 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.
	37	The expansion of facilities or infrastructure for the bulk transportation of water, sewage or storm water where: (a) the facility or infrastructure is expanded by more than 1000 metres in length; or (b) where the throughput capacity of the facility or infrastructure will be increased by 10% or more–
	39	The expansion of canals, channels, bulk storm water outlet structures within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, where such expansion will result in an increased development footprint but excluding where such expansion will occur behind the development setback line.
	40	The expansion of infrastructure by more than 50 square metres within a watercourse or within 32 metres of a watercourse, measured from



		the edge of a watercourse, but excluding where such expansion will occur behind the development setback line.
	47	The widening of a road by more than 6 meters or the lengthening of a road by more than 1 kilometre where no reserve exists, where the existing reserve is wider than 13,5 meters or where the existing road is wider than 8 meters.
	49	The expansion of facilities or infrastructure for the bulk transportation of dangerous goods in solid form, outside an industrial complex or zone, by an increased throughput capacity of 50 tons or more per day.
	22	The construction of a road, outside urban areas, (i) with a reserve wider than 13,5 metres, or (ii) where no reserve exists where the road is wider than 8 metres, or (iii) for which an environmental authorisation was obtained for the route determination in terms of activity 5 in Government Gazette 387 of 2006 or activity 18 in notice 545 of 2010
No. R. 545	6	The construction of facilities or infrastructure for the bulk transportation of dangerous goods in solid form, outside an industrial complex, using funiculars or conveyors with a throughput capacity of more than 50 tons per day
	15	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
	26	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 39 of 2004), except where such commencement requires basic assessment in terms of Notice R544 of 2010
No. R. 546	4	The construction of a road wider than 4 meters with a reserve less than 13.5 meters outside urban areas, in: aa) A protected area identified in terms of NEMPAA, excluding conservancies; (bb) National Protected Area Expansion Strategy Focus areas; (dd) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority; (ff) Critical biodiversity areas or ecosystem service areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans; (hh) Areas within 10 kilometers from national parks or world heritage Sites or 5 kilometers from any other protected area identified in terms of NEMPAA or from the core area of a biosphere reserve.
	16	The construction of infrastructure outside urban areas in sensitive areas covering 10 square meters or more where such construction occurs within a watercourse or within 32 meters of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line outside urban areas, in: (aa) A protected area identified in terms of NEMPAA, excluding conservancies; (bb) National Protected Area Expansion Strategy Focus areas; (dd) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority; (ff) Critical biodiversity areas or ecosystem service areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans; (hh) Areas within 10 kilometers from national parks or world heritage Sites or 5 kilometers from any other protected area identified in terms of NEMPAA or from the core area of a biosphere reserve.



19	<p>The widening of a road by more than 4 meters or lengthening of a road by more than 1 kilometer, outside urban areas, in:</p> <p>aa) A protected area identified in terms of NEMPAA, excluding conservancies;</p> <p>(bb) National Protected Area Expansion Strategy Focus areas;</p> <p>(dd) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority;</p> <p>(ff) Critical biodiversity areas or ecosystem service areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;</p> <p>(hh) Areas within 10 kilometers from national parks or world heritage Sites or 5 kilometers from any other protected area identified in terms of NEMPAA or from the core area of a biosphere reserve.</p>
24	<p>The expansion of infrastructure where the infrastructure will be expanded by 10 square meters or more where such construction occurs within a watercourse or within 32 meters of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line outside urban areas, in:</p> <p>(aa) A protected area identified in terms of NEMPAA, excluding conservancies;</p> <p>(bb) National Protected Area Expansion Strategy Focus areas;</p> <p>(dd) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority;</p> <p>(ff) Critical biodiversity areas or ecosystem service areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;</p> <p>(hh) Areas within 10 kilometers from national parks or world heritage sites or 5 kilometers from any other protected area identified in terms of NEMPAA or from the core area of a biosphere reserve.</p>

Please note that any authorisation that may result from this application will only cover activities specifically applied for.

## 2. TYPE OF APPLICATION REQUIRED FOR ABOVE-MENTIONED ACTIVITIES

### 2.1 Application for Basic Assessment

Is this an application for conducting a basic assessment (as defined in the Regulations)?

NO

Please indicate when the basic assessment report will be submitted:

### 2.2 Application for Scoping and Environmental Impact Reporting (S&EIR) assessment

Is this an application for S&EIR (as defined in the Regulations)?

YES

Please indicate when the S&EIR Report (including the Plan of Study for EIA) will be submitted:

**Scoping Report and Plan of Study for EIA to be submitted in Nov 2012 – still to be confirmed**

The S&EIR report will be submitted after consultation with the competent authority:

YES



**PART D: ACTIVITIES APPLIED FOR IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT: WASTE ACT, 2008 AND THE ENVIRONMENTAL IMPACT REGULATIONS, 2010**

**SECTION 1: TYPE OF APPLICATION AND FACILITY:**

**1.1 Indicate the type of facility/operation and fill in the required sections only**

TYPE OF ACTIVITY	MARK	SECTIONS OF THE FORM TO BE FILLED IN
Recycling and/or recovery Facility		All except Section 5
Storage and or transfer Facility		All except Section 5
Treatment facility		All except Section 5
Disposal facility	X	All

**1.2 Activities applied for:**

An application may be made for more than one listed or specified activity that, together, make up one development proposal. All the listed activities that make up this application must be listed.

INDICATE THE NO. & DATE OF THE RELEVANT NOTICE:	ACTIVITY NUMBERS (AS LISTED IN THE WASTE MANAGEMENT ACTIVITY LIST) :	DESCRIBE EACH LISTED ACTIVITY (and not as per the wording of the relevant Government Notice):
No. R. 718 July 2009 Category A	19	The expansion of facilities or changes to existing facilities for any process or activity, which requires an amendment of an existing permit or license or a new permit or license in terms of legislation governing the release of pollution, effluent or waste.
No. R. 718 July 2009 Category B	9	The disposal of any quantity of hazardous waste to land
	11	The construction of facilities for activities listed in Category B of this schedule (not in isolation to associated activity)

NB: Authorisation issued will only cover activities applied for and listed above. Activities added in the middle or after the processing of this authorisation may mean a totally new application.

### 1.3 TYPE OF APPLICATION REQUIRED FOR ABOVE-MENTIONED ACTIVITIES

#### 1.3.1 Application for Basic Assessment

Is this an application for conducting a basic assessment (as defined in the Regulations)?

	NO

Please indicate when the basic assessment report will be submitted:

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#### 1.3.2 Application for Scoping and Environmental Impact Reporting (S&EIR) assessment

Is this an application for S&EIR (as defined in the EIA Regulations, 2010) reporting?

YES	

Please indicate when the S&EIR Report (including the Plan of Study for EIA) will be submitted:

**Scoping Report and Plan of Study for EIA to be Submitted in Nov 2012 – still to be confirmed**

The scoping report will be submitted after consultation with the competent authority:

YES	NO
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### 1.4 Size of Site and Classification

Size of facility for a waste management activity  
 Area where the waste management activity takes place  
 Classification of facility in terms of climatic water balance  
 Classification of Facility in terms of the type and the quantity of waste received

<b>759 ha (Total 2500 ha – existing plus proposed)</b>
<b>Tutuka Power Station</b>
<b>To be determined during the EIA process</b>
<b>Ash disposal site</b>

### 1.5 Operational times

PERIOD	FROM	UNTIL
Weekdays	<b>Continuous (24 hour daily operation)</b>	
Saturdays		
Sunday		
Public holidays		



## SECTION 2: WASTE QUANTITIES

2.1 Indicate or specify types of waste and list the estimated quantities expected to be managed daily (should you need more columns, you are advised to add more)

Hazardous waste	Non hazardous waste	Total waste handled (tonnes per day)
Ash	-	Approximately 12 700 m <sup>3</sup> per day. This translates to approximately 12 700 tons per day (utilising a specific gravity for fly ash of 2.3 and the bulk density of 1 ton/m <sup>3</sup> )

Source of information supplied in the table above Mark with an "X"

Determined from volumes

Determined with weighbridge/scale

Estimated

X

2.2 Recovery, Reuse, Recycling, treatment and disposal quantities:

Indicate the applicable waste types and quantities expected to be disposed of and salvaged annually:

TYPES OF WASTE	MAIN SOURCE (NAME OF COMPANY)	QUANTITIES		ON-SITE RECOVERY REUSE RECYCLING TREATMENT OR DISPOSAL	OFFSITE RECOVERY REUSE RECYCLING TREATMENT OR DISPOSAL	OFFSITE DISPOSAL
		TONS/MONTH	M <sup>3</sup> /MONTH	method & location	method location and contractor details	
Ash	Tutuka Power Station		Approximately 381 000 m <sup>3</sup>	On site dry disposal	-	-

## SECTION 3: GENERAL

3.1 Prevailing wind direction (e.g. NWW)

November – April	North Westerly
May - October	Easterly

3.2 The size of population to be served by the facility

Mark with "X"	Comment
0-499	Not Applicable – the facility is for Tutuka power station usage only
500-9,999	
10,000-199,999	
200,000 upwards	

3.3 The geological formations underlying the site:

Granite		Quartzite	
Shale	X	Dolomite	
Sandstone		Dolerite	X

Other \_\_\_\_\_

## SECTION 4: COMPETENCE TO OPERATE SITE

It is imperative that the holder of the waste management licence is a fit person in terms of section 59 of the NEMWA (59 of 2008). To assess the holder's competence to operate the site, please disclose the following:

### 4.1 Legal compliance

Has the applicant ever been found guilty or issued with a non compliance notice in terms of any national environmental management legislation?

Has the applicant's licence in terms of the Waste Act 2008 ever been revoked?

Has the applicant ever been issued with a non compliance notice or letter in terms of any South African Law?

YES/NO	DETAILS
NO	These details have specific reference to Tutuka Power Station
NO	
NO	

**NB:** Details required above include any information that the applicant wants the Department to take into consideration in determining whether they are a "fit person" and this includes reasons why the offence happened and measures in place to prevent recurrence

### 4.2 Technical competence

What technical skills are required to operate the site?

How will the applicant ensure and maintain technical competency in the operation of the site?

<ul style="list-style-type: none"> <li>• An ash system Engineer (Mechanical)</li> <li>• A Civil Engineer</li> <li>• A quantity surveyor</li> <li>• Senior technician(Eskom)</li> <li>• Site supervisor (Roshcon)</li> <li>• Site manager(Roshcon)</li> <li>• Contracts manager (Eskom)</li> <li>• Maintenance personnel (Roshcon and Eskom)</li> <li>• Stacker operators</li> </ul>	<p>Training, quality control and assurance as well as plant monitoring , ensuring that the current operations of the dump is as per the design.</p>
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### 4.3 Details of applicant's experience and qualification along with that of relevant employees must be summarised as shown in the table below:

NAME	POSITION	DUTIES AND RESPONSIBILITIES	QUALIFICATIONS AND EXPERIENCE
Please note these are the current names and are accurate as of August 2012, it should be noted that the specific people involved may change from time to time.			
Ryno Lacock	PSM	Power Station Manager	B. Eng, B.Com, M.B.A. 22 years
Johan Venter	Civil Engineer (External)(Eskom)	Civil/Structural System Engineer	B.Tech Civil Engineering 12 yrs experience



Jan Zwart	Materials Handling Contracts Manager (Eskom)	Contracts Management	National N Diploma Mechanical 29 yrs experience
Egard van Rensburg	Mechanical Engineer (Eskom)	Ash Plant System Engineer	National Higher Diploma 18 yrs experience
Marius van Wyk	Senior Technician (Eskom)	Contract Supervision	N4 Certificate (Mechanical ) Artisan, 24 yrs experience
Blikkies Blignaut	Site Supervisor (Roshcon)	Site Supervision/conveyors	Matric/N3 Mechanical Artisan 22 yrs experience
Janavari Nkabinde	Site Supervisor (Roschon)	Site Supervision/ash handling	St 6, 13 years
Pearson Cameron	Site Manager (Roshcon)	Site Management	Higher Teacher Degree 20 yrs experience
Dudzile Lephoto	Safety Officer (Roshcon)	Safety	National Diploma in safety 6 yrs experience
Strauss Roux	Contracts Manager (Roshcon)	Contract Management	National Diploma (Project Management) National Diploma (Coal handling) 22 years

#### 4.4 Financial Provisions

Provide a plan of estimated expenditure for the following:

	ATTACHED/NOT ATTACHED	SECTION OF THE REPORT WHERE IT IS ATTACHED
Environmental Monitoring	Not Attached	The information will be provided at EIR/ESR
Provision and replacement of infrastructure	Not Attached	
Restoration and aftercare	Not Attached	

## SECTION 5: LANDFILL PARAMETERS

### 5.1 The method of disposal of waste:

Land-building

Land-filling



Both



### The dimensions of the disposal site in metres

	At commencement	After rehabilitation
Height/Depth	Unknown at this stage – however footprint is estimated to be 759 ha requiring 229 million m <sup>3</sup> of air space	
Length		
Breadth		

### 5.2 The total volume available for the disposal of waste on the site:

Volume Available	Mark with "X"	Source of information (Determined by surveyor/ Estimated)
Up to 99	<input type="checkbox"/>	<input type="checkbox"/>
100-34 999	<input type="checkbox"/>	<input type="checkbox"/>
35 000- 3,5 million	<input type="checkbox"/>	<input type="checkbox"/>
>3,5 million	<input checked="" type="checkbox"/>	Tutuka Power Station is anticipated to ash approximately 229 million m <sup>3</sup> until the end of its life span in 2055 (approximately 44 years)  This ash dump shall be able to accommodate the ashing requirements of the power station for the next 44 years, from 2012 to 2055.

### 5.3 The total volume already used for waste disposal:

(a) Will the waste body be covered daily

(b) Is sufficient cover material available

(c) Will waste be compacted daily

If the answers (a) and/or (b) are No, what measures will be employed to prevent the problems of burning or smouldering of waste and the generation of nuisance?

The waste disposal facility is an Ash Dump at the Tutuka Power Station – Tutuka use dust suppression sprayers and rehabilitation is done on completed working areas. The top soil thickness is approximately 1 meter thick in front of the ash dump. Compaction is done prior to conveyor shifts. Tutuka normally stack and dose their ash

### 5.4 The Salvage method

Mark with an "X" the method to be used.

At source

Recycling installation

Formal salvaging

Contractor

No salvaging planned



## 5.5 Fatal Flaws for the site:

Indicate which of the following apply to the facility for a waste management activity:

Within a 3000m radius of the end of an airport landing strip	NO
Within the 1 in 50 year flood line of any watercourse	YES
Within an unstable area(fault zone, seismic zone, dolomitic area, sinkholes)	NO
Within the drainage area or within 5 km of water source	YES
Within an area with shallow and/or visible water table	NO
Within an area adjacent to or above an aquifer	NO
Within an area with shallow bedrock and limited available cover material	NO
Within 100 m of the source of surface water	YES
Within 1km from the wetland	YES
Indicate the distance to the boundary of the nearest residential area	10.6 km (Thuthukani)
Indicate the distance to the boundary of the industrial area	4.7 km (Tutuka Power Station)

## 5.6 Wettest six months of the year

November- April	X
May -October	

## 5.7 For the wettest six month period indicated above, indicate the following for the preceding 30 years

Only rainfall data from January 1998 to December 2009 was available from Tutuka Power Station

	Total rainfall for 6 months	Total A-pan evaporation for 6 months	Climatic water balance
For the 1 <sup>st</sup> wettest year - 2006	837mm	-	-
For the 2 <sup>nd</sup> wettest year - 2009	776mm	-	-
For the 3 <sup>rd</sup> wettest year - 2004	728mm	-	-
For the 4 <sup>th</sup> wettest year - 2000	655mm	-	-
For the 5 <sup>th</sup> wettest year - 2002	591mm	-	-
For the 6 <sup>th</sup> wettest year - 2008	569mm	-	-
For the 7 <sup>th</sup> wettest year - 2003	524mm	-	-
For the 8 <sup>th</sup> wettest year - 1999	509mm	-	-
For the 9 <sup>th</sup> wettest year - 1998	503mm	-	-
For the 10 <sup>th</sup> wettest year - 2007	493mm	-	-



## 5.8 Location and depth of ground water monitoring boreholes:

Codes of boreholes	Borehole locality	Depth (m)	Latitude	Longitude
AMB01	Monitoring borehole south clean water dam.		-26.80890	29.41490
AMB02	Monitoring borehole upstream ashing area settling dam.		-26.78750	29.41190
PMB04	Monitoring borehole south-east of power station and Stein Muller Dam.		-26.78660	29.36390
PMB06	Monitoring borehole north of the power station and North Potable Dam.		-26.76840	29.34620
PMB07	Monitoring borehole north-east of the power station and Dirty Water Dam.		-26.76740	29.35930
PMB08	Monitoring borehole north of the rehabilitated old Domestic Waste Site.		-26.76000	29.37290
PMB09	Monitoring borehole next to the stream from dam below Sewage Plant.		-26.75940	29.35860
CMB10	Monitoring borehole south of coal stock yard.		-26.74640	29.35760
CMB12	Monitoring borehole below pollution control dam next to Uityk Spruit.		-26.73250	29.35310
CMB19	Monitoring borehole north of coal stock yard below dam CMD15		-26.73420	29.35880
AMB21	Production borehole south of ash stack next to the clean water dam		-26.79290	29.40850
AMB24D	Monitoring borehole in ash stack on standby		-26.77700	29.40730
AMB24S	Monitoring borehole in ash stack on standby		-26.77700	29.40730
AMB25D	Monitoring borehole in ash stack on south of the front stack. Deep.		-26.77580	29.39870
AMB25S	Monitoring borehole in ash stack on south of the front stack. Shallow		-26.77580	29.39870
AMB26D	Monitoring borehole in the ash stack rehabilitated area. Deep		-26.77170	29.39690
AMB26S	Monitoring borehole in ash stack on south of the front stack. Shallow		-26.77170	29.39690
AMB31	Production borehole at ashing office		-26.77180	29.38660
CMB32	Monitoring borehole north of coal stock yard.		-26.73570	29.35740
DMB33	North of the solid waste site.		-26.77058	29.32516
DMB34	North of the solid waste site.		-26.77054	29.32634



DMB35	South of the solid waste site and next to the entrance.	-26.77337	29.32485
AMB36	Monitoring borehole north of ash stack.	-26.76540	29.40300
AMB51	Monitoring borehole about 700 m south of ash stack west of blue pipeline.	-26.78357	29.38785
AMB52	Monitoring borehole about 1 km south of ash stack east of blue pipeline.	-26.78834	29.39233
AMB53	Monitoring borehole south of ash stack about 1 km east of AMB52.	-26.78630	29.39920
AMB54	Monitoring borehole south of hazardous disposal site.	-26.77500	29.39690
AMB55	Monitoring borehole east of remedial plant.	-26.77450	29.39170
AMB56A	Monitoring borehole between clean and dirty water dam.	-26.79540	29.41250
AMB56B	Monitoring borehole between clean and dirty water dam.	-26.79540	29.41250
PMB60	Monitoring borehole east of power station west of tar road.	-26.78260	29.36810
AMB61	Monitoring borehole west of ashing east of tar road.	-26.78110	29.37040
AMB62	Borehole at Clean water dam's outflow.	-26.80310	29.41130
AMB63	Monitoring borehole below settling water dam.	-26.79130	29.41660
AMB64	Monitoring borehole south of ashing area	-26.78570	29.41230
AMB65	Monitoring borehole south of ashing area.	-26.78230	29.41360
AMB67A	Monitoring borehole south of ashing area.	-26.78190	29.41010
AMB67B	Monitoring borehole south of ashing area.	-26.78190	29.41010
CMB69	Monitoring borehole south of coal stock yard.	-26.74620	29.36110
CMB70	Monitoring borehole south of coal stock yard next to Racesbult Spruit.	-26.74980	29.35550
CMB71	Monitoring borehole south of coal stock yard next to Racesbult Spruit.	-26.74900	29.35310
CMB72	Monitoring borehole north of coal stock yard next to Uitkyk Spruit.	-26.73150	29.35130
PMB75	Monitoring borehole south east of power station and south of conveyer.	-26.77810	29.36110
PMB76	Monitoring borehole east of power station and north-east of new coal stockpile.	-26.77420	29.36110
AMB77D	Monitoring borehole south of clean water dam AMD07.	-26.80357	29.41231



AMB77S	Monitoring borehole south of clean water dam AMD07.	-26.80357	29.41231
AMB78D	Monitoring borehole east of AMB77.	-26.80344	29.41352
AMB78S	Monitoring borehole east of AMB77.	-26.80344	29.41352
DMB86	Old borehole with piezometer north of the solid waste site.	-26.77076	29.32434
DMB87	North of new proposed extension.	-26.77023	29.32423
DMB88	North of new proposed extension.	-26.76941	29.32376
DMB89	West of proposed new extension and north of the borrow pit.	-26.77081	29.32241
AMB90A	Monitoring borehole south of ashing area east of stream - Deep.	-26.77931	29.40823
AMB90B	Monitoring borehole south of ashing area east of stream - Shallow.	-26.77931	29.40823
AMB91A	Monitoring borehole south of ashing area west of stream - Deep.	-26.77927	29.40765
AMB91B	Monitoring borehole south of ashing area west of stream - Shallow.	-26.77927	29.40765
AMB92A	Monitoring borehole on south-eastern corner of ash stack - Deep.	-26.78089	29.41401
AMB92B	Monitoring borehole on south-eastern corner of ash stack - Shallow.	-26.78089	29.41401
AMB93A	Monitoring borehole south of ashing area and AMB90 and east of stream - Deep.	-26.78285	29.40955
AMB93B	Monitoring borehole south of ashing area and AMB90 and east of stream - Shallow.	-26.78285	29.40955

**5.9 Location and depth of landfill gas monitoring test pit:**

**Not Applicable – the Tutuka Power Station does not have gas monitoring boreholes - this application is for an ash dump facility.**

Codes of boreholes	Borehole locality	Latitude	Longitude
.....	.....	○	○
.....	.....	○	○



