



# Environmental Impact Assessment (EIA) and Waste Licensing Application for the Proposed Continuous Ashing Activities at Tutuka Power Station

**Public Meeting**

**Standerton**

**22 November 2012**



## Purpose of the Meeting

- Provide information regarding the project
- Provide an opportunity to raise issues regarding the potential impacts of the project on the environment
- Invite I&APs to register on the project database
- Provide an opportunity to interact with the project team





# Conduct of the Meeting


- Focus on issues at hand
- Equal opportunity
- Cell phones on silent
- Work through the facilitator
- Speak in language of choice



# Role Players



|  |  |
|--|--|
|  | <b>Lidwala Consulting Engineers (SA) (Pty) Ltd</b><br>• Independent Environmental Assessment Practitioner  |
|  | <b>Imaginative Africa</b><br>• Public Participation Consultant   |
|  | <b>Eskom Holdings SOC Ltd – Generation Division</b><br><b>Tutuka Power Station</b><br>• Applicant  |
|  | <b>Department of Environmental Affairs</b><br>• Lead Decision-maker for the Environmental Authorization Application                              |
|  | <b>Interested and Affected Parties</b><br>• Raise comments and issues regarding the proposed project for inclusion in the relevant documentation |
|  | <b>Commenting Authorities</b><br>• MDEDET,<br>• DWA<br>• SAHRA<br>• DAFF<br>• DMR, etc..   |






# What does the Project Entail?

Presented by:  
E van Rensburg



# Problem Statement

- The current main dump operation will run out of space by September 2028
- The position three standby ash dump will run out of space by December 2016.
- If standby dump positions 4,5 and 6 are used, then it will run out of space by 2020.
- The main spreader requires outages for major repairs.
- The existing emergency ash handling area at the Power Station is too small.





## What does the Project Entail?

- Tutuka Power Station envisages the continuation of dry ash disposal over Eskom owned land, purchased before the commencement of environmental laws, such as the Environment Conservation Act
- Eskom would like to align its continued ashing activities, with the requirements of the NEMWA waste licensing processes
- The proposed continuous development is an ash disposal facility with the following specifications:
  - Capacity of airspace of 353,1 million m<sup>3</sup> (Existing and remaining); and
  - Ground footprint of 759 Ha (Proposed Continuous Ashing & pollution control canals)
- The project also includes the expansion of the emergency ashing area at the power station from approximately 1900m<sup>2</sup> to 21 000m<sup>2</sup>



## Proposal

- Convert the existing main dump operation to radial operation.
- Expand the ash dump to the south side which becomes the new standby ash dump.
- Construction of new channels, pipes, fences and roads.
- Construct new spreader system.
- Construct concrete slabs and channels at the emergency off loading area.



## Existing Ash Dump



## Total Ash Dump





## New spreader system



## Environmental Studies

**Presented by:  
Ashlea Strong**



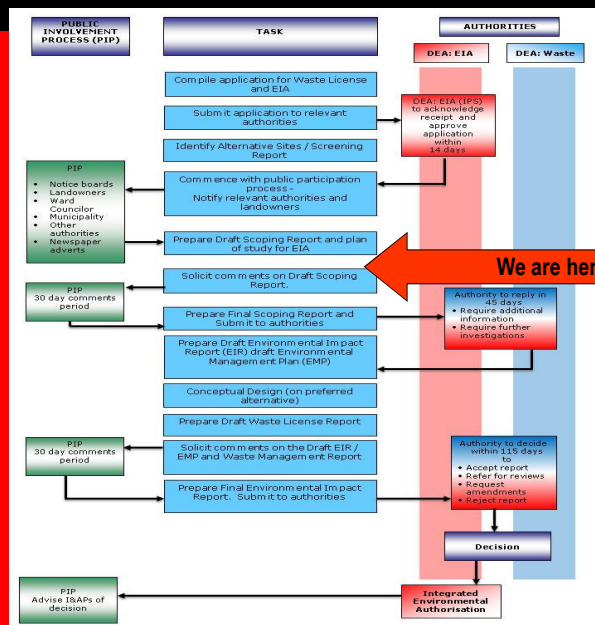


# Why Environmental Studies?

- Legislative tool used to ensure that potential impacts are identified, assessed and mitigated as required
- Integrated Application:



# The EIA Process





## Envisaged Timeline

| Phase / Task                | Envisaged Date             |
|-----------------------------|----------------------------|
| Application form submission | August 2012                |
| Screening / Scoping Phase   | August 2012 – January 2013 |
| EIA Phase                   | January – June 2013        |
| Final Documents to DEA      | June 2013                  |
| Integrated Authorisation    | August 2013                |

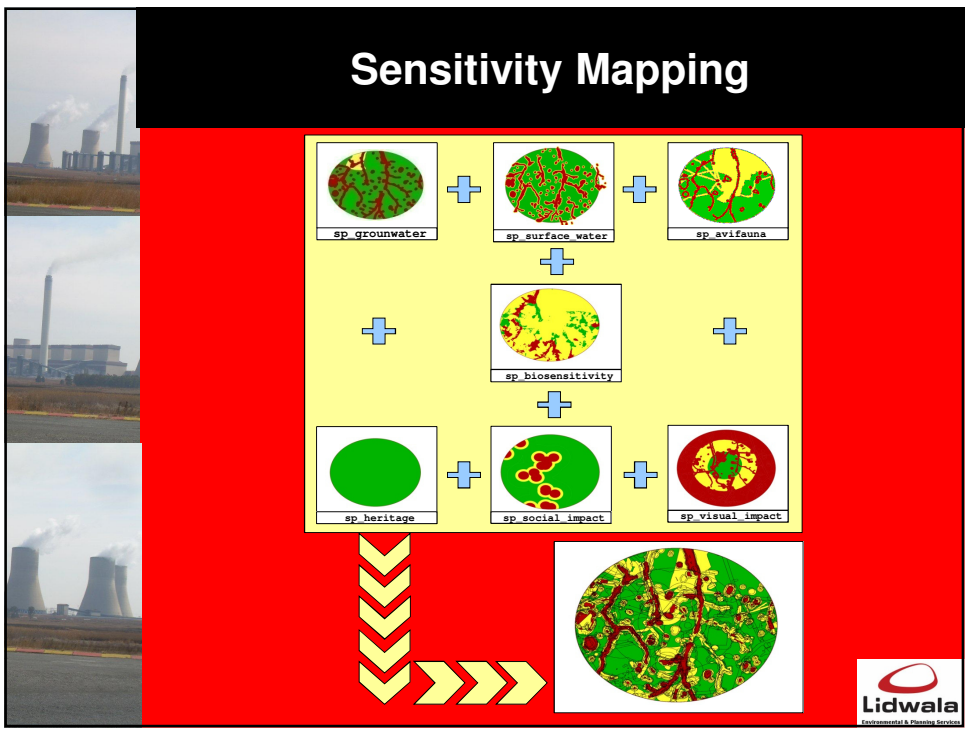
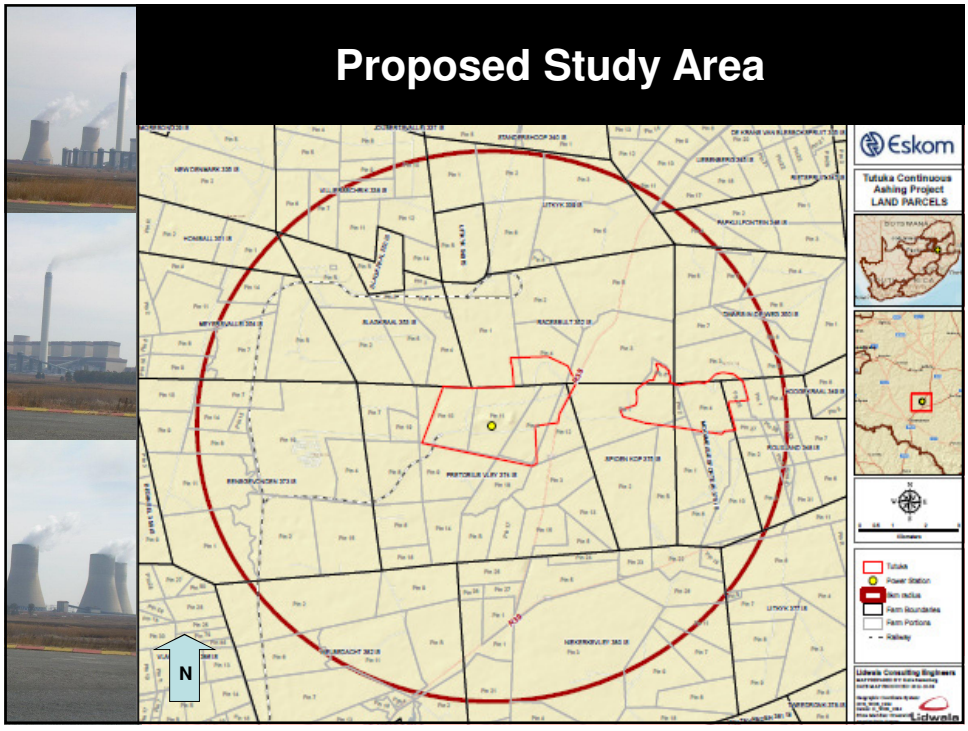


## Sensitivity Mapping

- Eskom have already identified an area for the proposed continuous ashing
- However - in order to allow for a robust environmental process all land within a radius of 8 km was assessed in order to:
  - Identify potential alternatives sites
  - Identify sensitive environmental aspects that may limit the suitability of all identified alternative sites







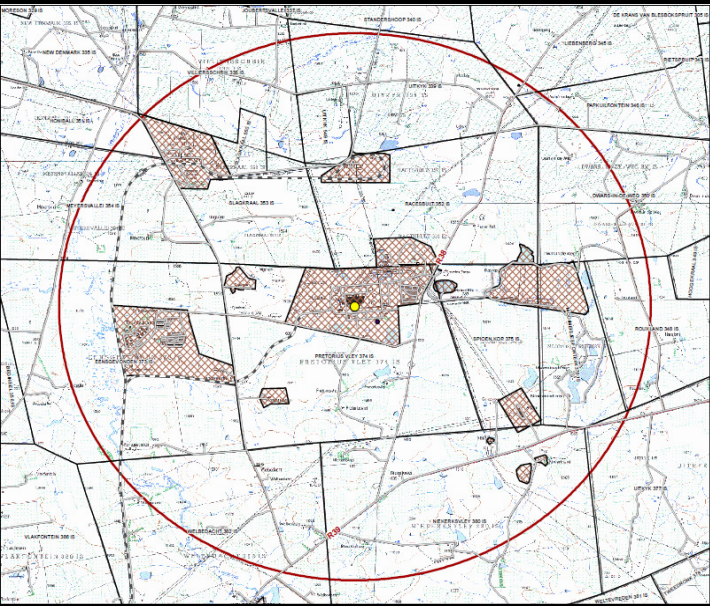


# Sensitivity Mapping

- In order to calculate a combined sensitivity rating for the study area, all the GIS layers received from each specialist area of study were combined to form one integrated layer
- Three results were then calculated from the integrated layer:
  - **maximum sensitivity wins:** The maximum sensitivity rating became the sensitivity index.
  - **sum of all sensitivity ratings:** The sensitivity index was the sum of each sensitivity rating.
  - **sum of all adjusted sensitivity ratings:** Each sensitivity rating found in the array was adjusted by the assigned adjustment factor for each particular layer. The sensitivity index was then the sum of these.
- The presented maps were then created by reclassifying each logic result into five classes, namely:
  - low sensitivity (green),
  - low medium sensitivity (Light green),
  - medium sensitivity (yellow),
  - medium high (orange),
  - high sensitivity (red).



# Sensitivity Mapping: No-Go Areas



**Eskom**

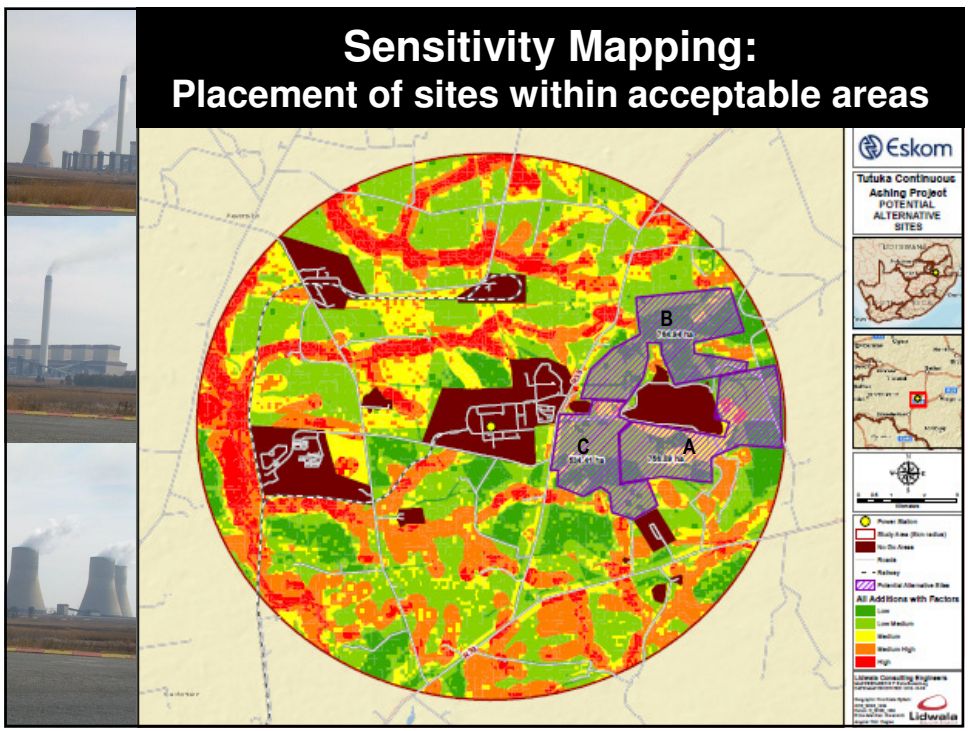
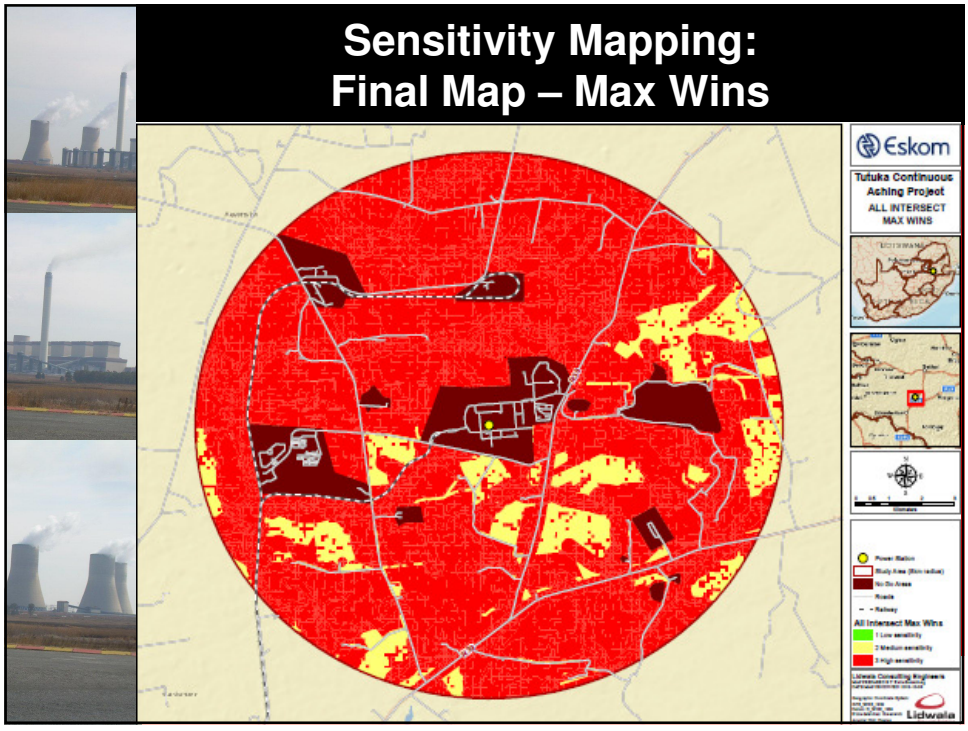
**Tutuka Continuous Ashing Project**

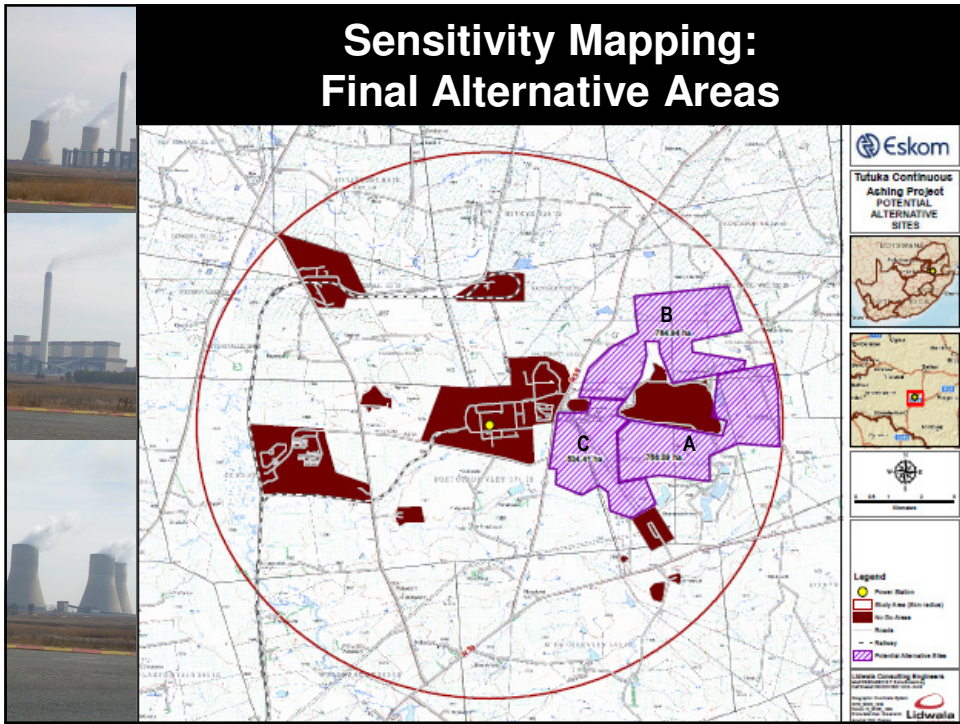
**NO GO AREAS**

Legend

- Power Station
- Study Area (5km radius)
- ▨ No Go Areas
- Roads
- Farm Boundaries
- Railway

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## Potential Impacts: Biophysical

- **Geology (underlying rocks)**
  - Impacts related to the construction-related earthworks
  - Impacts related to the pollution in case of spillage/leakage of hydrocarbon and other hazardous material from storage facilities
- **Geotechnical issues (Stability)**
  - Phase 1 geotechnical study will be undertaken in the EIA phase.
- **Topography (Hills and Valleys)**
  - Change to drainage patterns due to construction-related earthworks and additional stormwater drainage patterns.

**Lidwala**  
Environmental & Planning Services



## Potential Impacts: Biophysical

- **Agricultural Potential**

- Pollution of soil due to handling, use and storage of hazardous substances during construction and operation.
- The loss of available top soil.
- Key variables that determine the land capability of the study area such as soil fertility reduced and disturbed due to the potential activities related to the ash disposal facility.
- The loss of viable agricultural land.

- **Avifauna (Birds)**

- Destruction of habitat and disturbance of birds due to Ash Disposal Facility
- Impacts due to associated Infrastructure such as powerlines e.g. Electrocutions, Collisions etc..



## Potential Impacts: Biophysical

- **Groundwater**

- Contamination of ground water due to hydrocarbon spillage and seepage into groundwater reserves, affecting groundwater quality.
- Further construction of infrastructure and compaction of the area will further contribute to reduced water infiltration rates to replenish groundwater aquifers.

- **Surface Water**

- Impacts on surface water quality;
- Impacts on hydrology;
- Impacts related to erosion and sedimentation;
- Impacts on aquatic biota; and
- Impacts on aquatic ecosystem services.





## Potential Impacts: Biophysical

- **Biodiversity (plants and animals)**

- Direct impacts on threatened flora and fauna species;
- Direct impacts on protected flora species;
- Direct impacts on common fauna species/ faunal assemblages (including migration patterns, corridors, etc.);
- Human - Animal conflicts;
- Loss or degradation of natural vegetation/ pristine habitat (including ecosystem functioning);
- Loss/ degradation of surrounding habitat;
- Impacts on SA's conservation obligations & targets;
- Increase in local and regional fragmentation/ isolation of habitat; and
- Increase in environmental degradation, pollution (air, soils, surface water).



## Potential Impacts: Social

- **Air Quality**

- Increase in dust generating activities during construction and operation including exceedances of PM10 concentrations and exceedances of dustfall rates.

- **Visual**

- Impact on the current visual landscape.
- Impact on sensitive receptors,

- **Heritage**

- identify the potential heritage sites within the study area
- identify any impacts (if any) that may occur on these sites as a result of the continuous ashing project

- **Socio-Economic**

- Perceptions and fears associated with the proposed project; and
- Local, site-specific issues.





## Conclusions and Recommendations

- Three Alternative Areas and the No-Go Alternative to be investigated in the EIA Phase
- Investigated alternatives for relocation of linear infrastructure (where required)
- Undertake detailed specialist studies
- Compile Environmental Impact Assessment Report
- Waste License Report to be compiled
- Geotechnical studies to be undertaken along with site survey
- Develop Conceptual Design



## Public Participation

**Presented by:  
Bongi Mhlanga**





## What is Public Participation?

- Public participation is a joint effort between:
  - Stakeholders
  - The proponent
  - Technical Specialists
  - Decision-makers
- Work together to produce better decisions
- Aim: To inform a wide range of I&APs
- Tool: Allows the public to exchange information and express their views and concerns
- Scoping: Facilitates the identification of issues and concerns early in the EIA process
- All contributions from I&APs will be fully documented, evaluated and responded to in the EIA



## Public Participation Process to Date

- Identification of Stakeholders or I&APs
- Notification and Advertisements
  - Project advertised in 2 newspapers
    - Highveld Tribune
    - Cosmos News
- Background Information Document
  - Distributed to all identified I&APs
  - Placed in local public libraries and municipalities
- Meetings:
  - Focus Group meetings, consultations, public meetings and one-on-one interactions
- **You can still get involved!! How?**









## Discussion

**Facilitator:  
Nicolene Venter**



## Way Forward

- Compilation and distribution of minutes
- Inclusion of I&AP comments in Final Environmental Scoping Report (FESR)
- Submission of FESR report to DEA and Provincial Environmental Authorities
- Release of FESR into the public domain
- Authority review
- DEA comments and decision on FESR and POS for EIA
- Proceed with EIA phase if FESR is Accepted



## Contact Details

### PUBLIC PARTICIPATION OFFICE CONTACT DETAILS

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