



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

Key Stakeholder Workshop

Highveld Visitors Centre, Ermelo

21 November 2012



Purpose of the Meeting

- Provide Stakeholder's with information regarding:
 - The proposed project
 - The EIA process to date
 - How to get involved in the project
 - Findings of the Scoping Study
- Provide Stakeholder's with the opportunity to raise issues regarding the potential impacts of the project on the environment
- Invite Stakeholder's to register on the project database
- Provide an opportunity for Stakeholder's 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

	Lidwala Consulting Engineers (SA) (Pty) Ltd <ul style="list-style-type: none"> • Independent Environmental Assessment Practitioner
	Imaginative Africa <ul style="list-style-type: none"> • Public Participation Consultant
	Eskom Holdings SOC Ltd – Generation Division Majuba & Tutuka Power Station <ul style="list-style-type: none"> • Applicant
	Department of Environmental Affairs <ul style="list-style-type: none"> • Lead Decision-maker for the Environmental Authorization Application
	Interested and Affected Parties <ul style="list-style-type: none"> • Raise comments and issues regarding the proposed project for inclusion in the relevant documentation
	Commenting Authorities <ul style="list-style-type: none"> • MDEDET, • DWA • SAHRA • DAFF • DMR, etc..





Responsibilities

Lidwala Consulting Engineers (SA) (Pty) Ltd (Consultant):

- Be independent with no vested interest
- Have the necessary qualifications & experience
- Responsible for EIA process, information & reports
- Provide relevant & objective information to the Authorities, the I&APs & the Applicant
- Ensure Public Participation Process (PPP) is undertaken
- Ensure all issues raised are addressed or responded to



Responsibilities

Eskom Holdings SOC Limited (Applicant):

- Appoint suitable, independent consultants
- Ensure adequate resources are available to conduct an effective, efficient & equitable EIA
- Ensure that the Consultants are provided with all relevant information to undertake the EIA effectively
- Ensure that the Consultant provides all relevant information to the Authorities





Responsibilities

Relevant Environmental Authority (National DEA):

- Efficient & expedient in evaluating proposals
- Compliance with regulatory requirements
- Inter-departmental co-operation & consultation
- Consultation with the Applicant & the Consultant
- Evaluation/review & decision-making
- Requiring sufficient detail to make informed decisions




Responsibilities

Interested & Affected Parties (I&APs) / Stakeholders



- Provide input & comment during various stages of the EIA process
 - Identify issues & alternatives
 - Review of reports
 - Draft Scoping Report (DSR)
 - Draft Environmental Impact Report (DEIR)
 - Waste License Report
- Provide input & comment within specific timeframes





What does the Majuba Project Entail?

**Presented by:
Tebogo Madisha – Majuba Power
Station**




What does the Project Entail?

- The project entails the continuation of dry ash disposal at Majuba Power Station
- Majuba disposes its ash via conveyors and stackers.
- Extension of drainage canals, access roads and fence installations.
- The extension is envisaged on previously acquired/purchased land (Existing footprint).



Current challenges:

- Majuba will run out space for the disposal of ash on the existing footprint



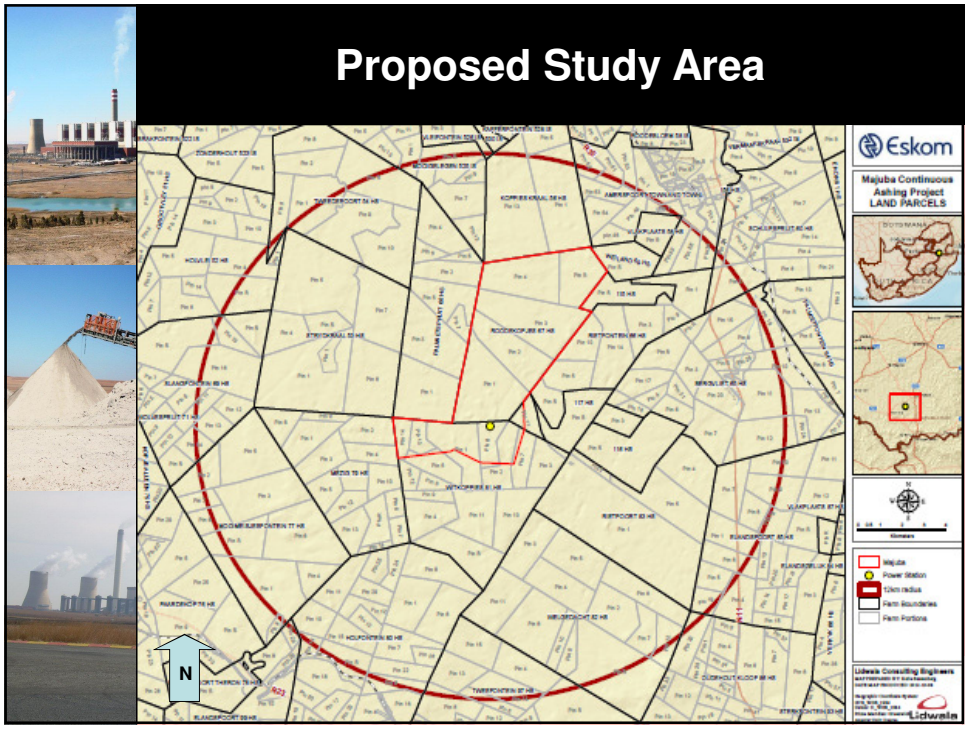
Specification and Requirements

- Land for continuous ash disposal up to 45 years (remaining life of station).
- Ash disposal capacity of 184 million cubic metres and land of 800 hectares.
- Eskom would like to align its ashing activities with NEMWA's requirements.
- EIA in progress to investigate potential alternatives within the vicinity of Majuba Power Station.




Majuba's Existing Ash Disposal Facility





What does the Tutuka Project Entail?

**Presented by:
E van Rensburg – Tutuka Power Station**



The figure is a presentation slide with a red background. It features a vertical strip of four images on the left side: a power station, a landscape, a conveyor belt, and a power station. The main text is centered and reads "What does the Tutuka Project Entail?" followed by "Presented by: E van Rensburg – Tutuka Power Station". The Lidwala logo is in the bottom right corner.



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 m³ (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 1900m² to 21 000m²

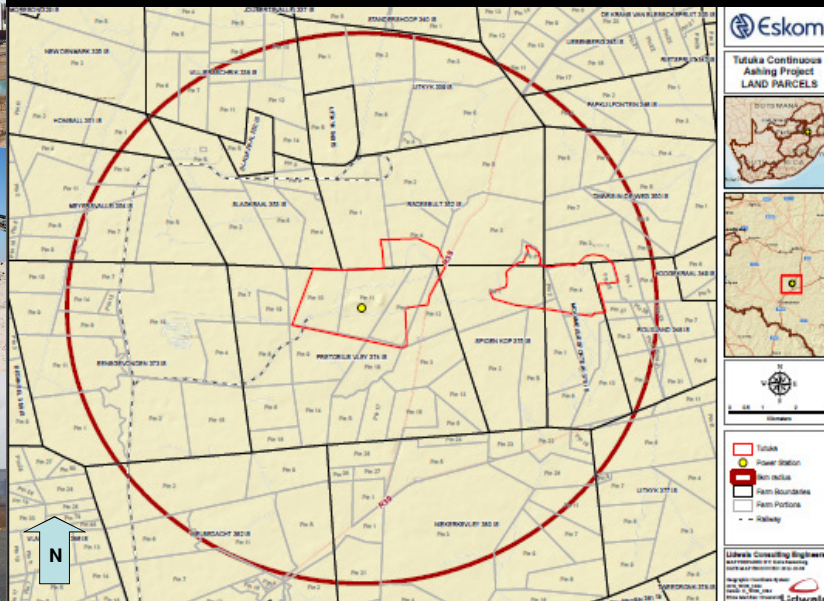


Proposal

- 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.



Proposed Study Area



Existing Ash Dump



VIEWING: **EXISTING**
DATE: **JANUARY 2011**
INFO:
Eskom TUTUULA Ash Dump



Total Ash Dump



VIEWING: **PHASE 3**
DATE: **JAN 2042 TO APR 2056**
INFO: **MAIN DUMP EXTENSION**
34.3 MILLION CUBIC METERS
Eskom TUTUULA Ash Dump

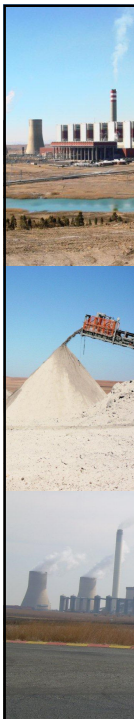


New spreader system



Environmental Studies

Presented by:
Ashlea Strong

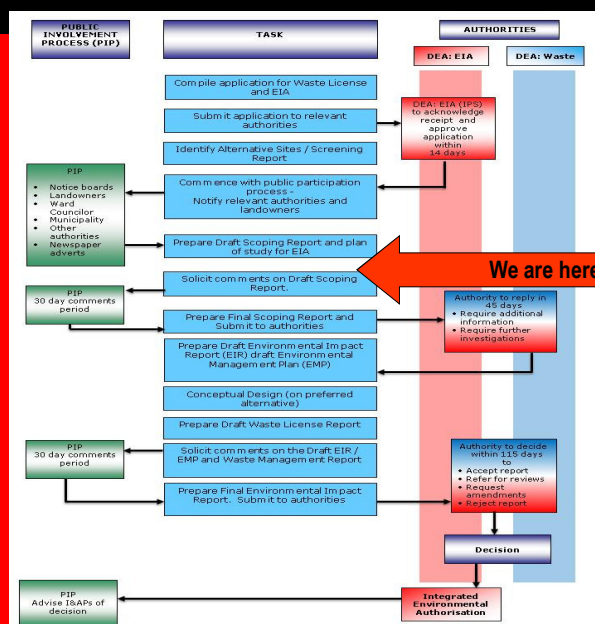


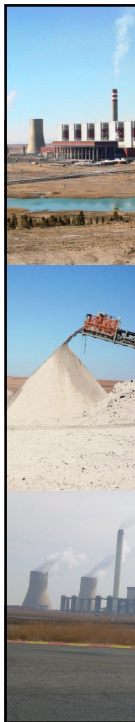
Why Environmental Studies?

- Legislative tool used to ensure that potential impacts are identified, assessed and mitigated as required
- Integrated Application:
 - National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended and the Environmental Impact Assessment Regulations, 2010;
 - GN R544 – Listing Notice 1: 11 Listed Activities
 - GN R545 – Listing Notice 2: 3 Listed Activities
 - GN R546 – Listing Notice 3: 4 Listed Activities
 - National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) and Government Notice 718 of 2009
 - Category A – 1 Listed Activity
 - Category B – 2 Listed Activities



The EIA Process





Envisaged Timeline

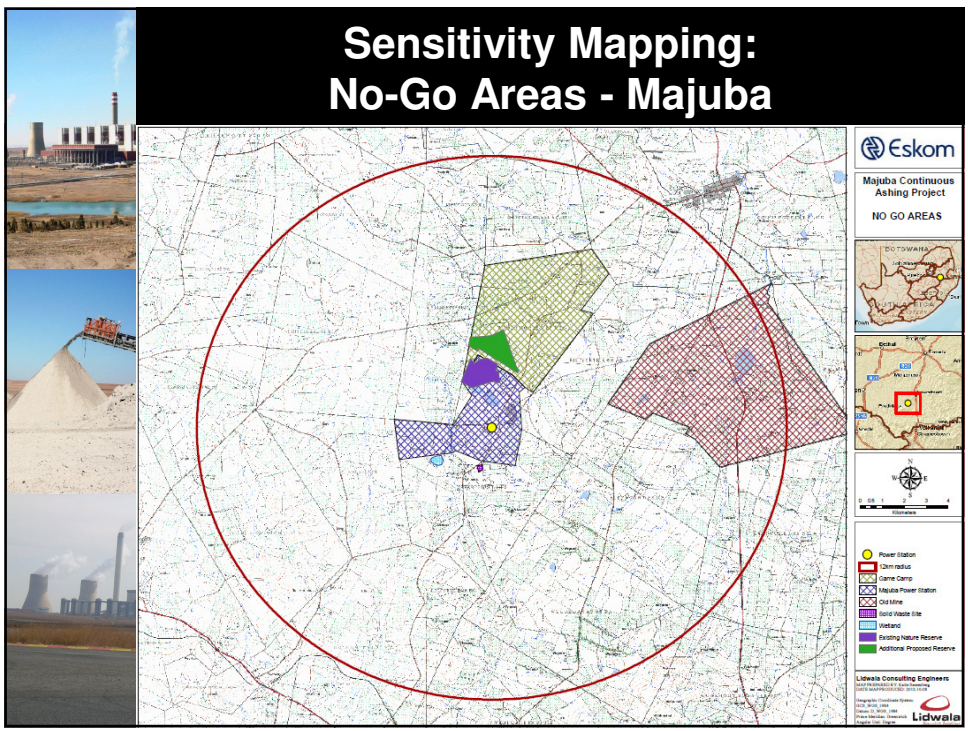
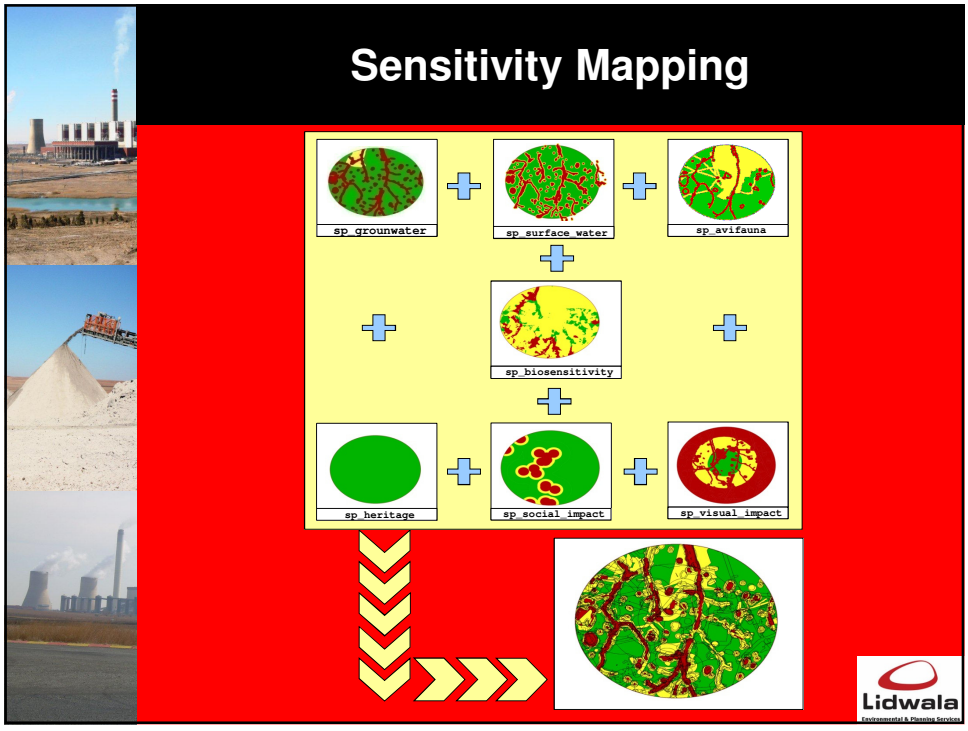
Phase / Task	Envisaged Date
Application form submission	August 2012
Screening / Scoping Phase	August 2012 – January 2013
EIA Phase	January – June 2013
Final Documents to DEA	June 2013
Authorisation and License	August 2013

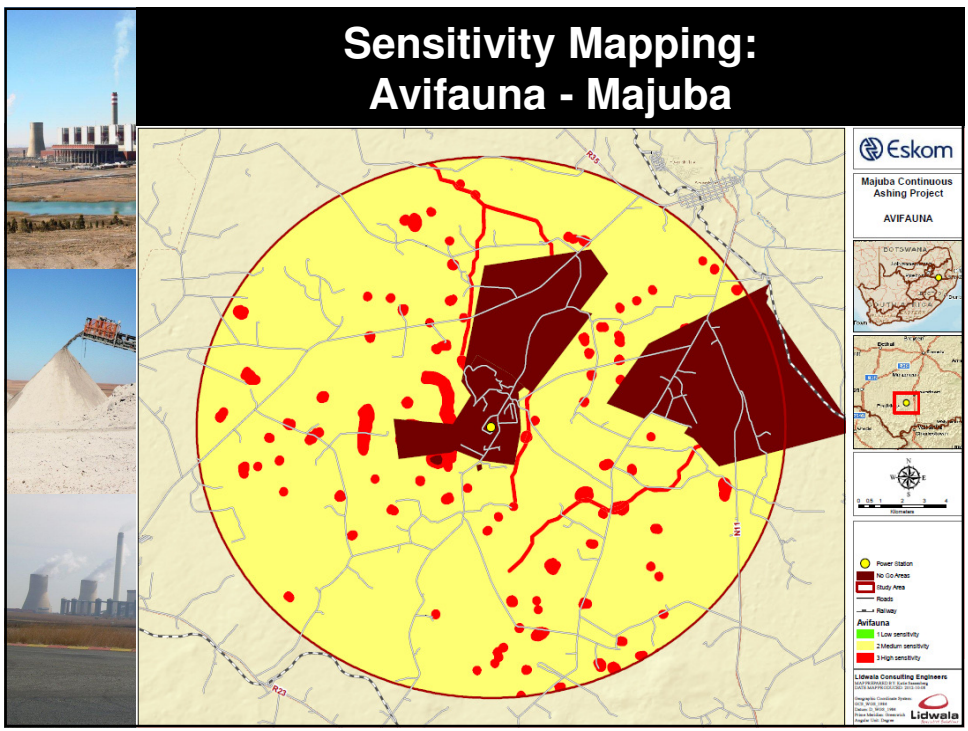
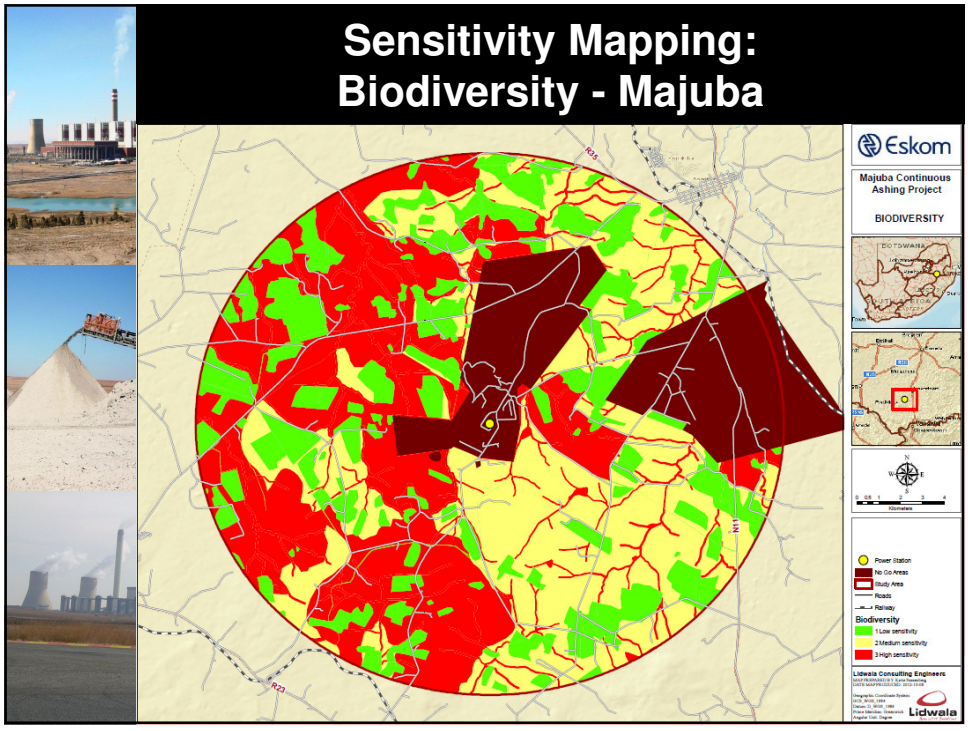


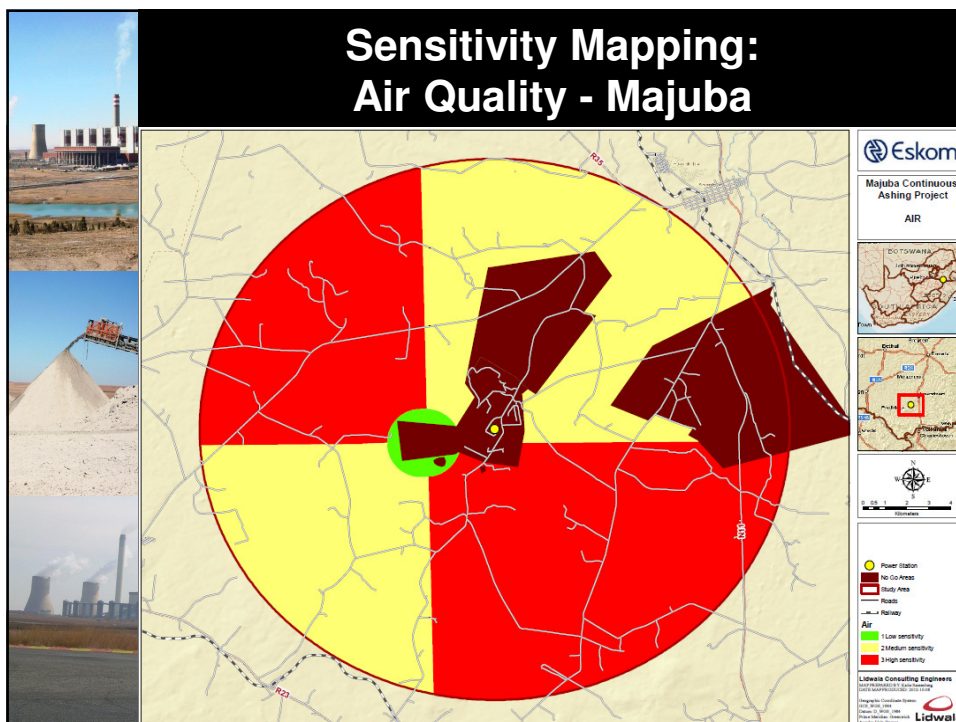
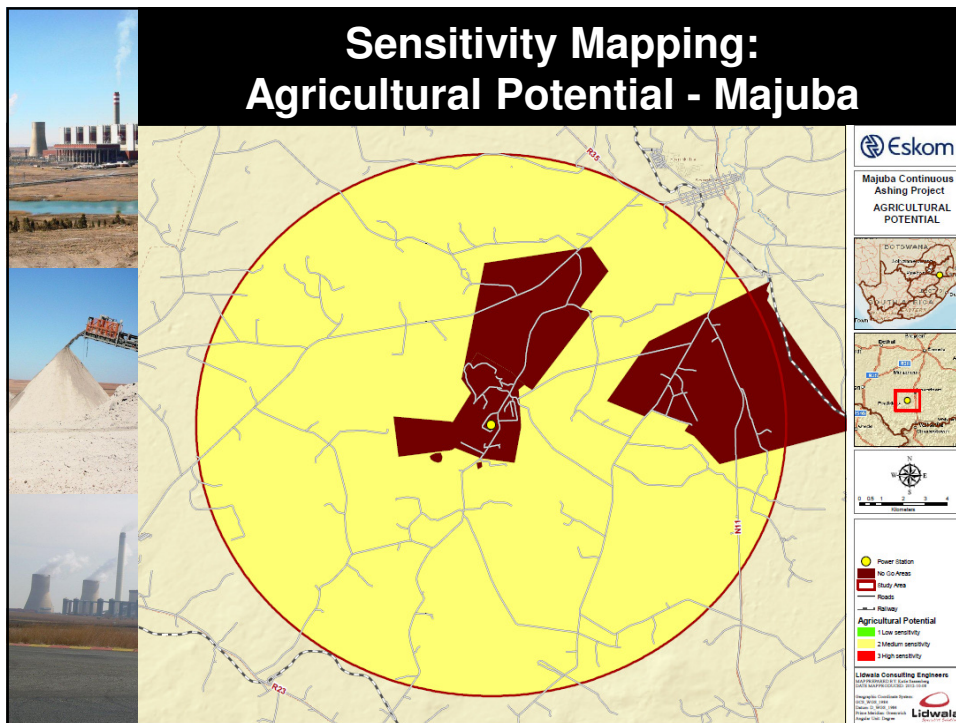
Sensitivity Mapping

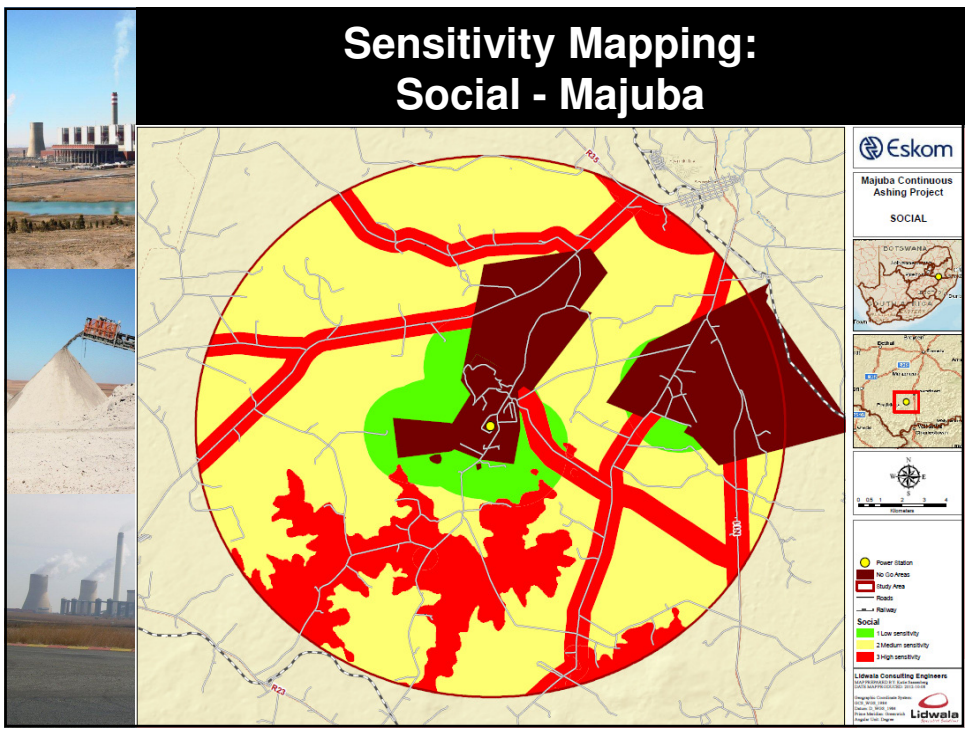
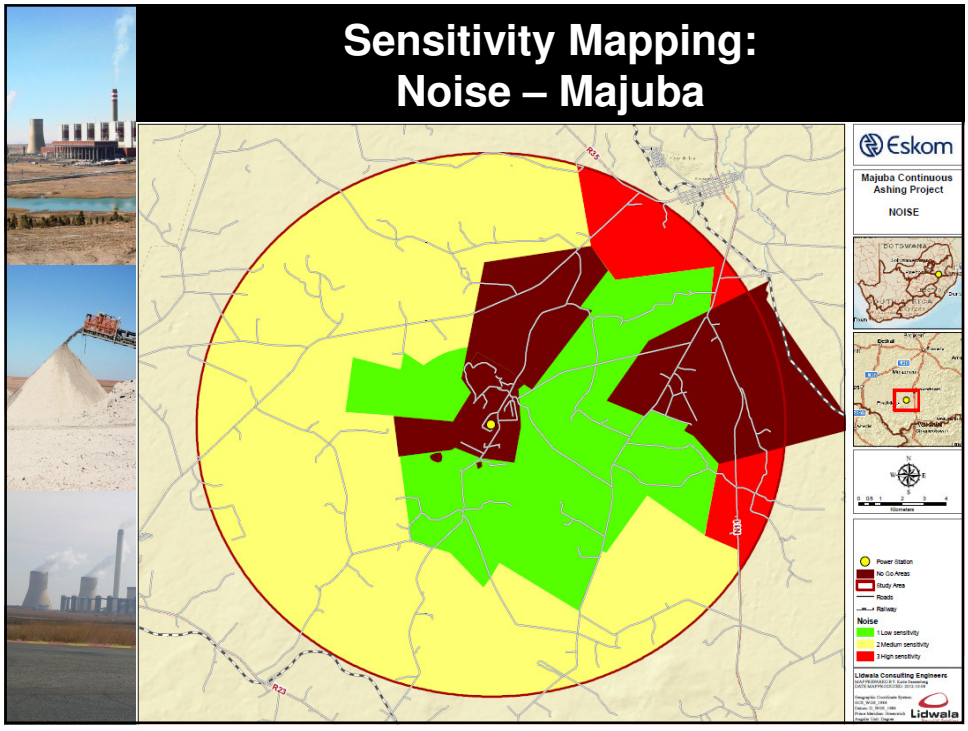
- Eskom have already identified areas at both Tutuka and Majuba for the proposed continuous ashing
- However - in order to allow for a robust environmental process all land within a pre-determined radius of the power station was assessed in order to:
 - Identify potential alternatives sites
 - Identify sensitive environmental aspects that may limit the suitability of all identified alternative sites












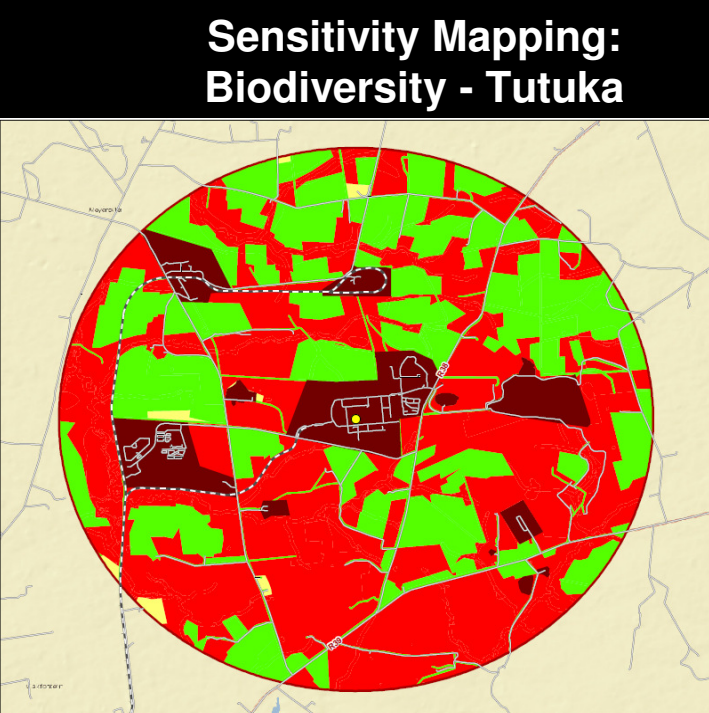





Tutuka Individual Sensitivity Maps


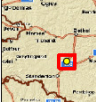



Sensitivity Mapping: Biodiversity - Tutuka














Tutuka Continuous Ashing Project
BIODIVERSITY


Legend

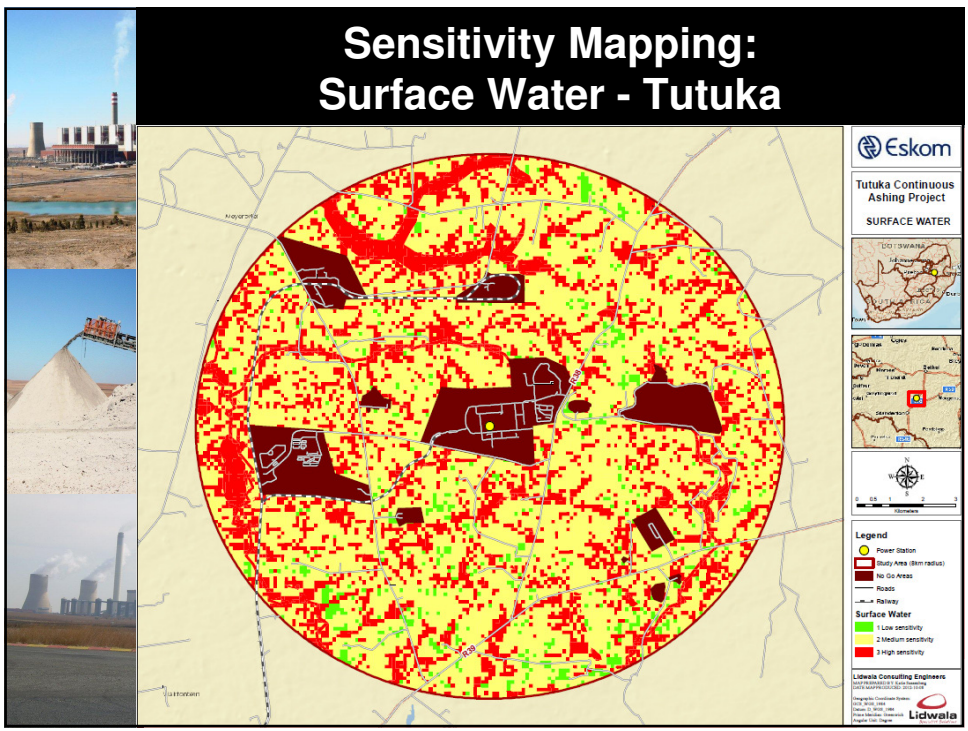
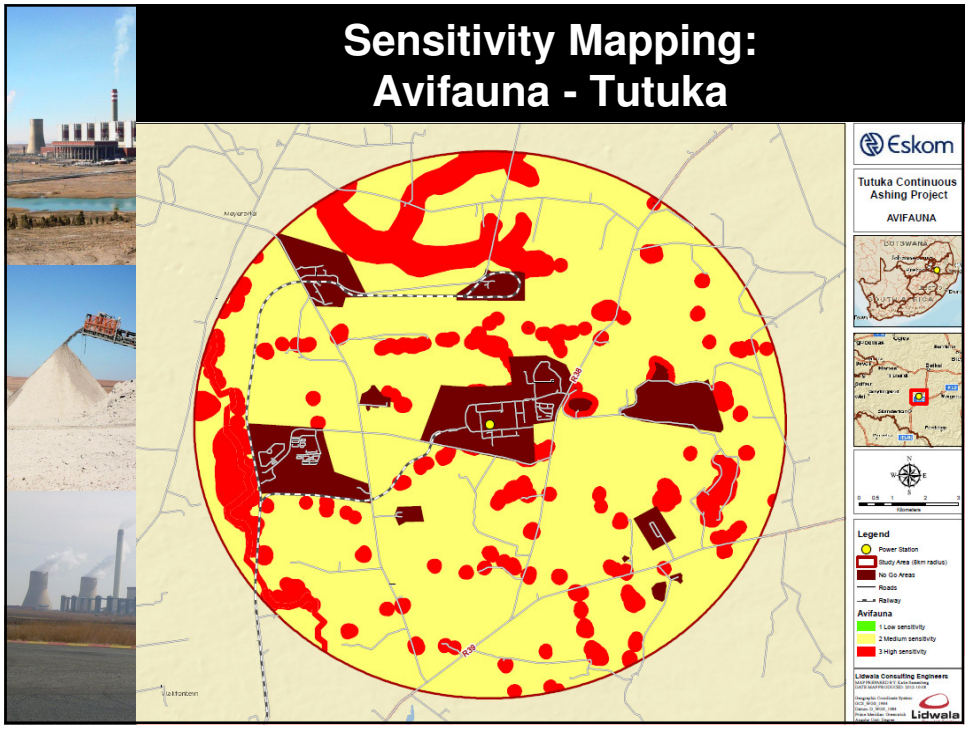
-  Power Station
-  Study Area (8km radius)
-  No Go Areas
-  Roads
-  Railway

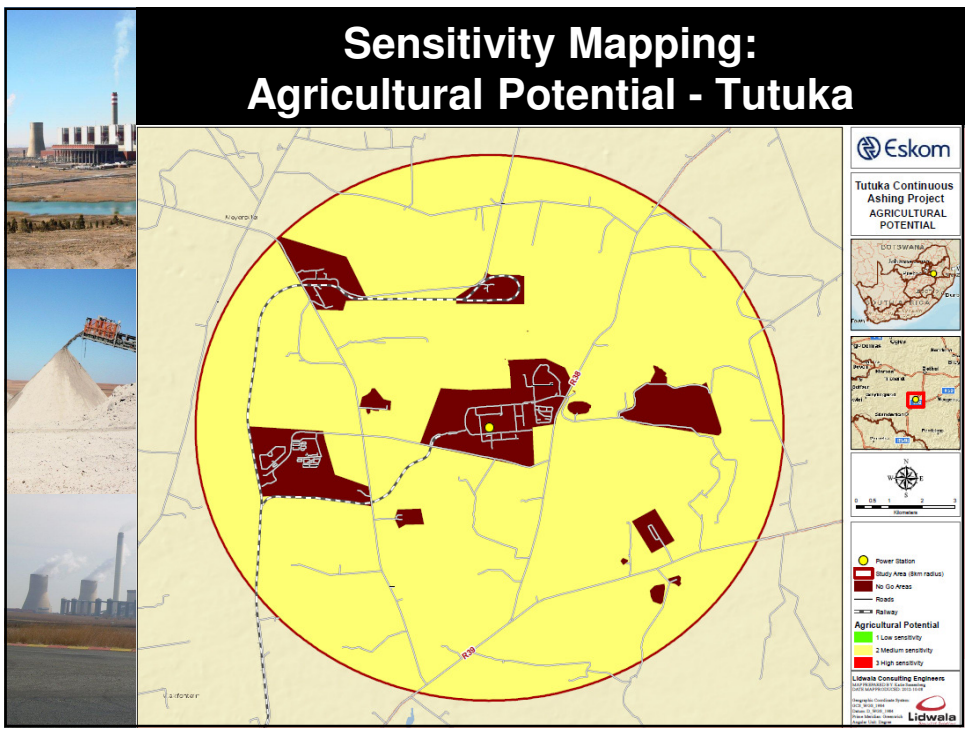
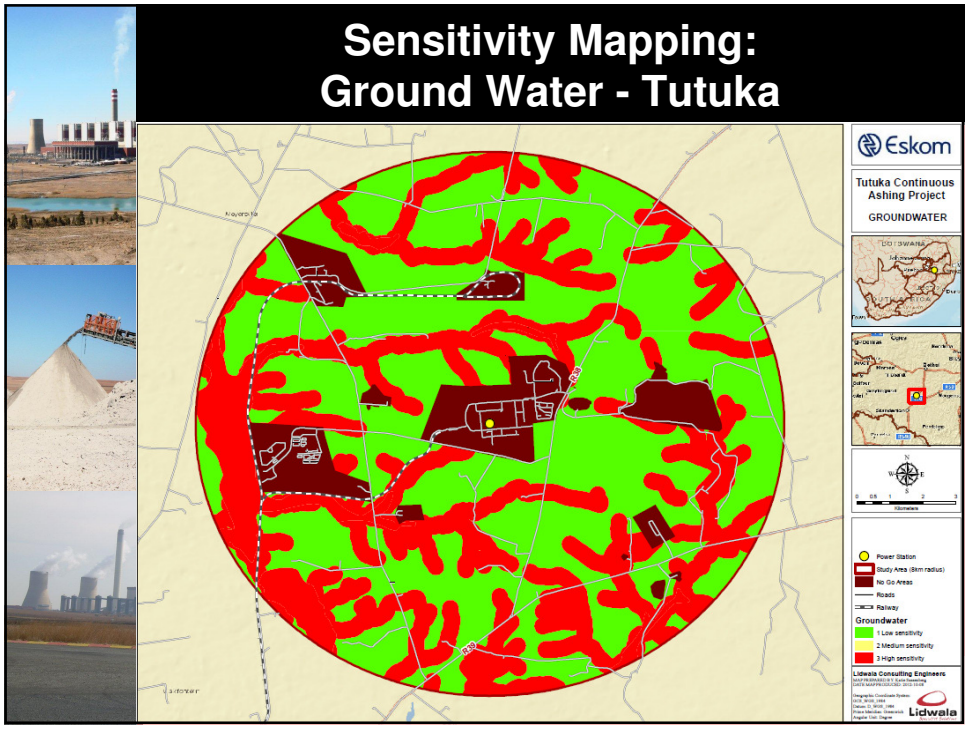
Biodiversity

-  1 Low sensitivity
-  2 Medium sensitivity
-  3 High sensitivity

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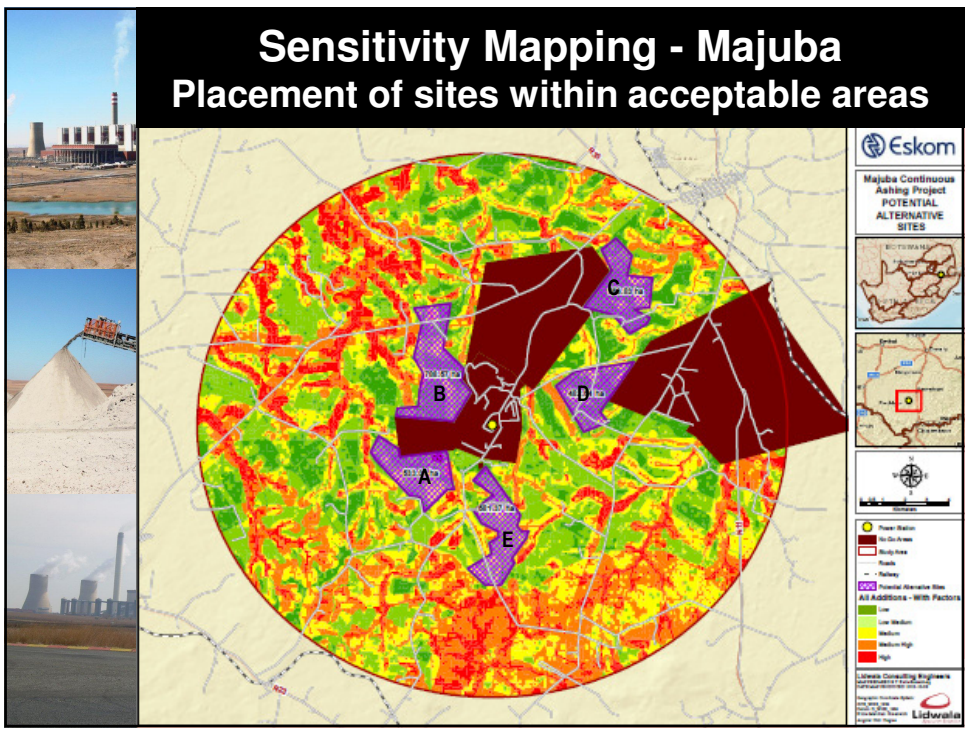
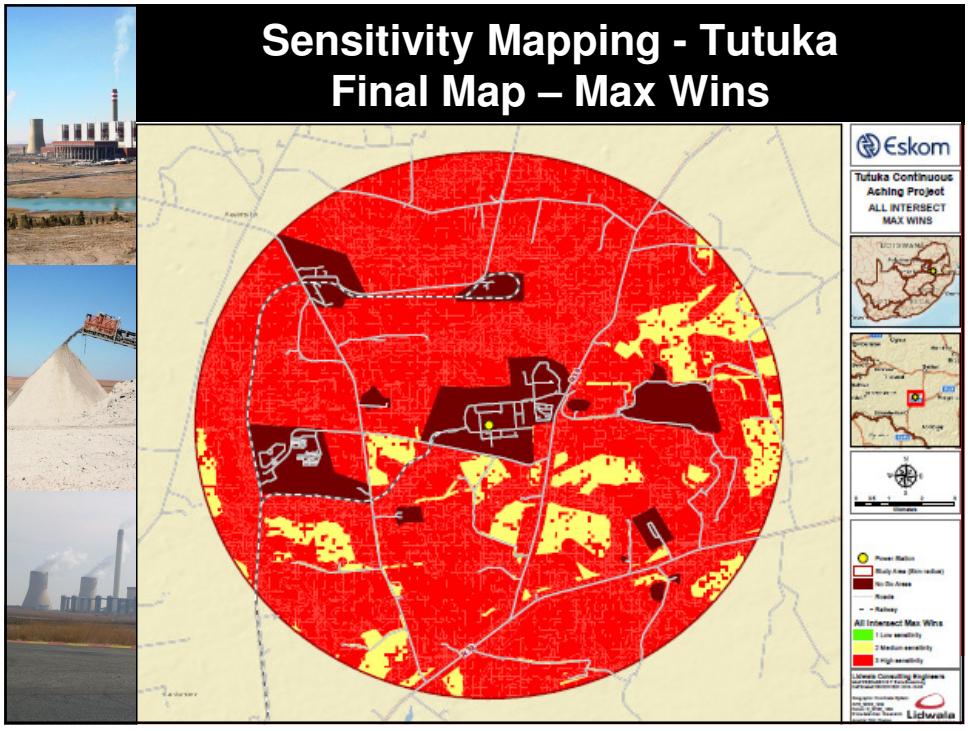
Sensitivity Mapping

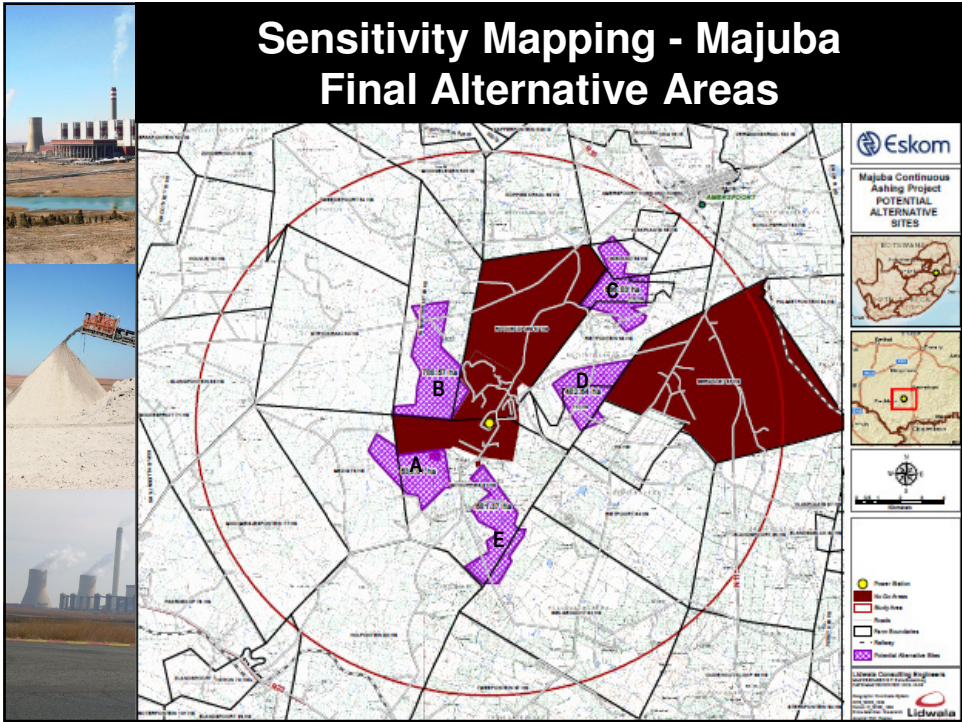
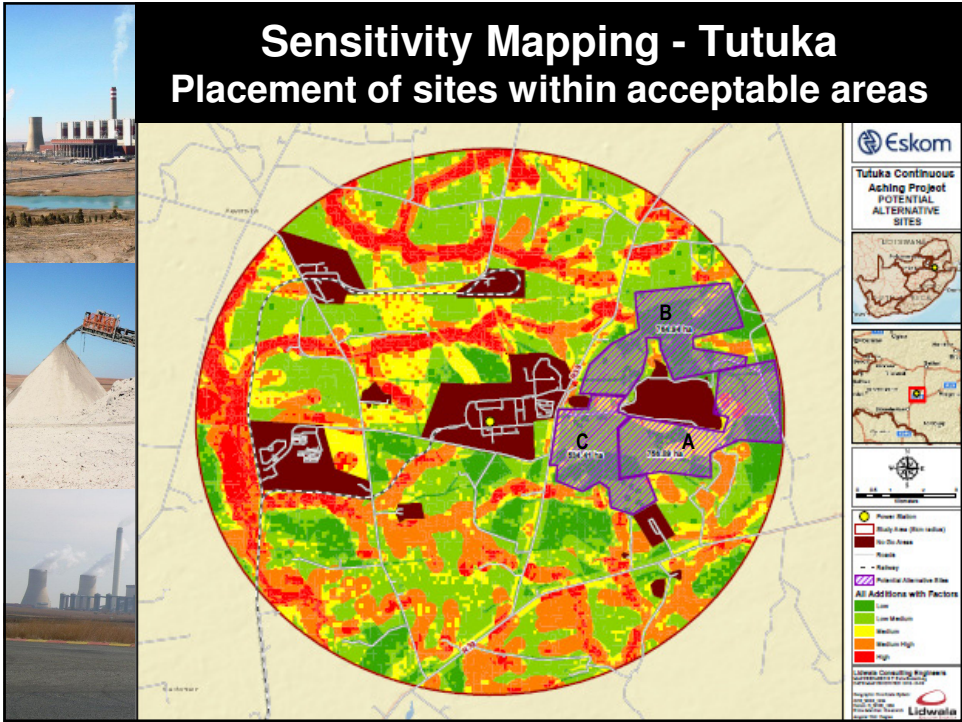
- In order to calculate a combined sensitivity rating for the study area, all the GIS layers received from each specialist area of study were combined to form one integrated layer
- Three results were then calculated from the integrated layer:
 - **maximum sensitivity wins:** The maximum sensitivity 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).

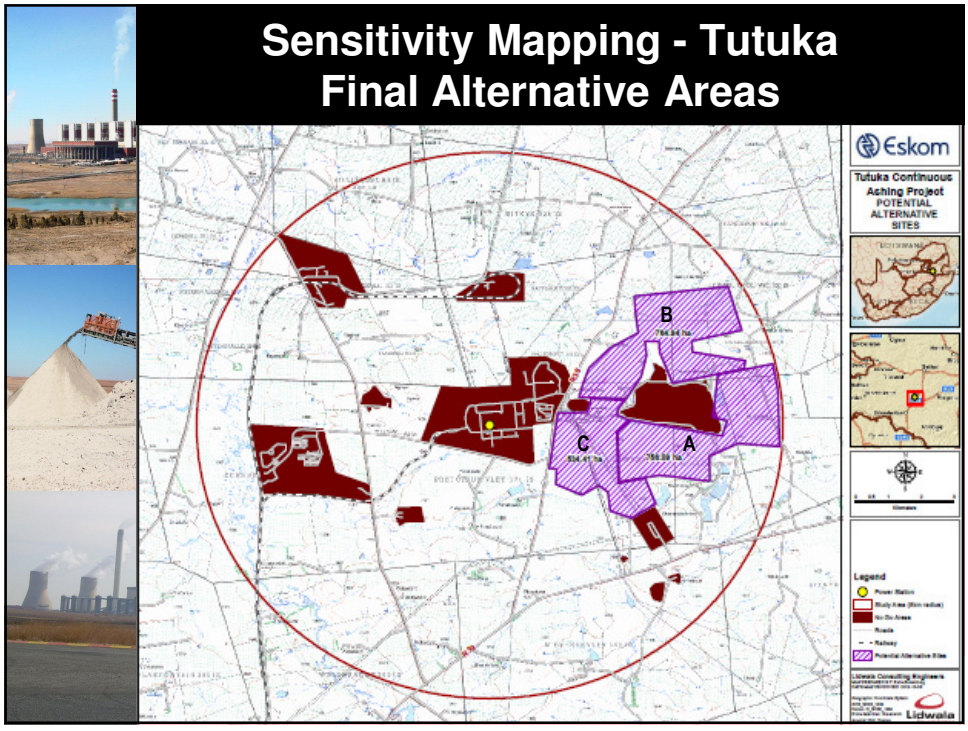


Sensitivity Mapping - Majuba Final Map – Max Wins









Potential Impacts: Biophysical

- **Geology**
 - 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**
 - Phase 1 geotechnical study will be undertaken in the EIA phase.
- **Topography**
 - Change to drainage patterns due to construction-related earthworks and additional stormwater drainage patterns.

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Environmental & Planning Services



Potential Impacts: Biophysical

- **Land Capability / 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**

- 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

- **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.

- **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.





Potential Impacts: Biophysical

- **Biodiversity**

- 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 power line; and
- Local, site-specific issues.





Conclusions and Recommendations

- **Majuba**
 - Five Alternative Areas and the No-Go Alternative to be investigated in the EIA Phase
 - Due to the fact that none of the alternative areas are big enough to stand alone the EIA will investigate which combination of 2 sites is most feasible for use
- **Tutuka**
 - Three Alternative Areas and the No-Go Alternative to be investigated in the EIA Phase
- Investigate alternatives for relocation / establishment 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
 - Majuba - Project advertised in 2 newspapers
 - The Record
 - Cosmos News
 - Tutuka - 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 – websites only
- Authority review
- DEA comments and decision on FESR and POS for EIA
- Proceed with EIA phase if FESR is Accepted



Contact Details

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