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

Pixley ka Seme Local Municipality

Focus Group Meeting

20 November 2012

Lidwala
Environmental & Planning Services

Purpose of the Meeting

- Provide I&AP'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 I&AP's with the 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 for I&AP's to interact with the project team

Lidwala
Environmental & Planning Services

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	**Lidwala Consulting Engineers (SA) (Pty) Ltd** • Independent Environmental Assessment Practitioner
Imaginative Africa	**Imaginative Africa** • Public Participation Consultant
Eskom	**Eskom Holdings SOC Ltd – Generation Division** **Majuba Power Station** • Applicant
environmental affairs Department: Environmental Affairs REPUBLIC OF SOUTH AFRICA	**Department of Environmental Affairs** • Lead Decision-maker for the Environmental Authorization Application
	Interested and Affected Parties • Raise comments and issues regarding the proposed project for inclusion in the relevant documentation
water affairs Department: Water Affairs REPUBLIC OF SOUTH AFRICA the dedet mineral resources Department: Mineral Resources REPUBLIC OF SOUTH AFRICA	**Commenting Authorities** • 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)

- 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 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 it's 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:

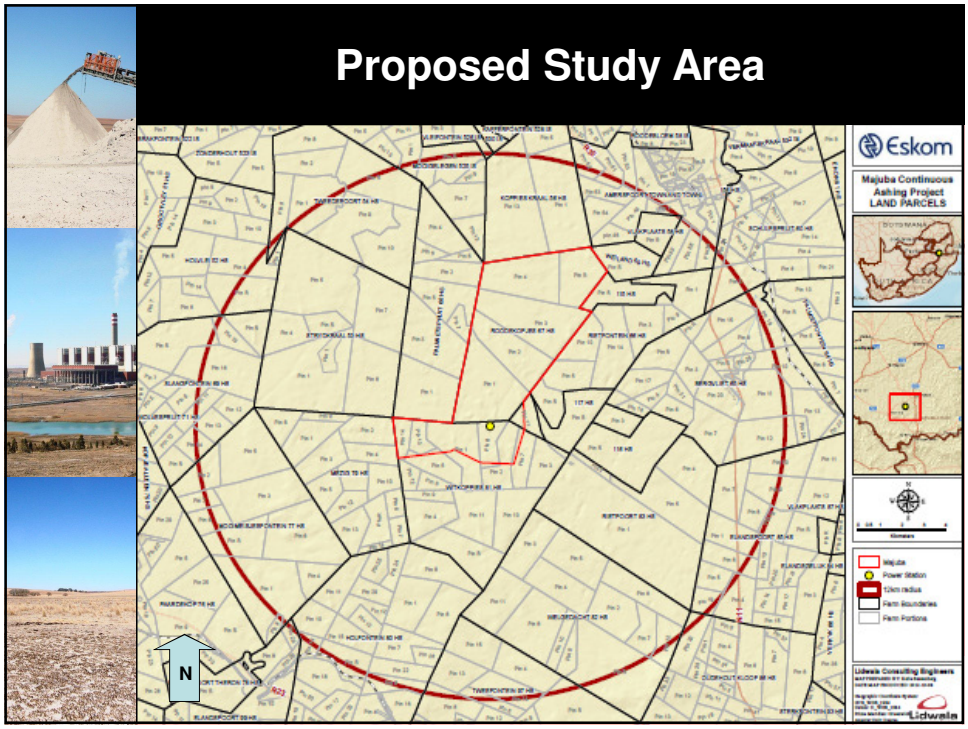
- Majuba will run out space for the disposal of ash on the existing footprint

Specification and Requirements

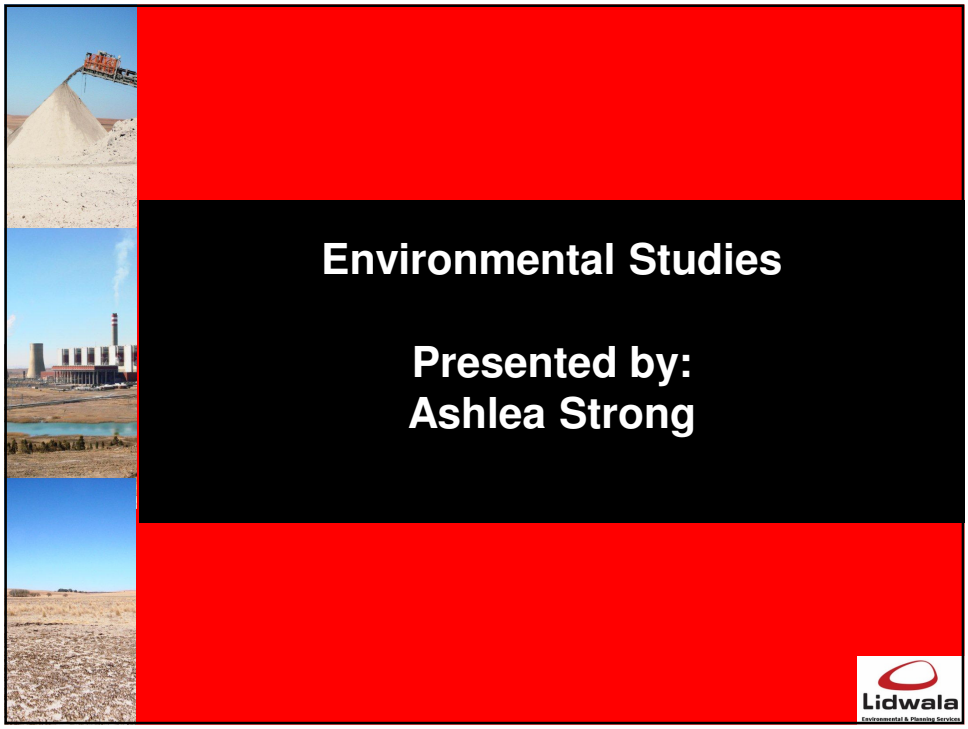
- Land for continuous ash disposal up to 45 years (remaining life of station).
- Ash disposal capacity of 184 million cubic metres and land of 800 hectares.
- Eskom would like to align its ashing activities with NEMWA's requirements.
- EIA in progress to investigate potential alternatives within the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

Lidwala

Majuba's Existing Ash Disposal Facility



Proposed Study Area



Environmental Studies

Presented by:
Ashlea Strong

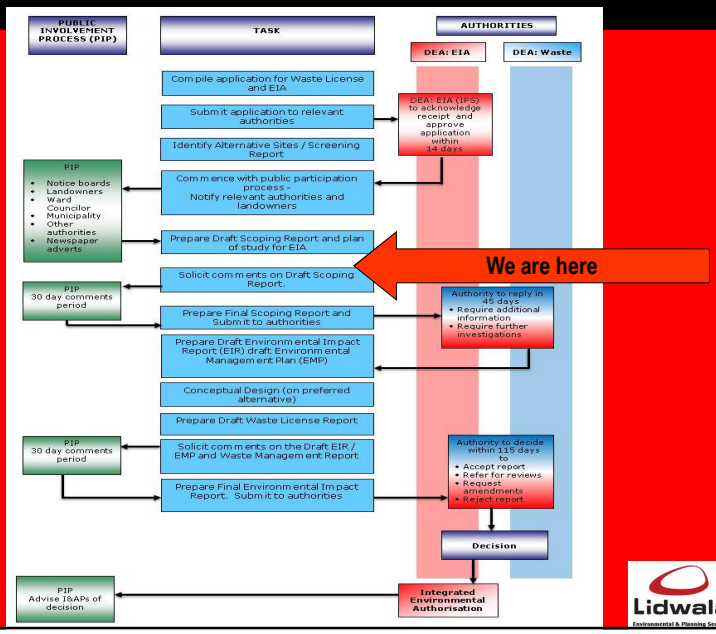
Lidwala
Environmental & Planning Services

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

Lidwala
Environmental & Planning Services

The EIA Process



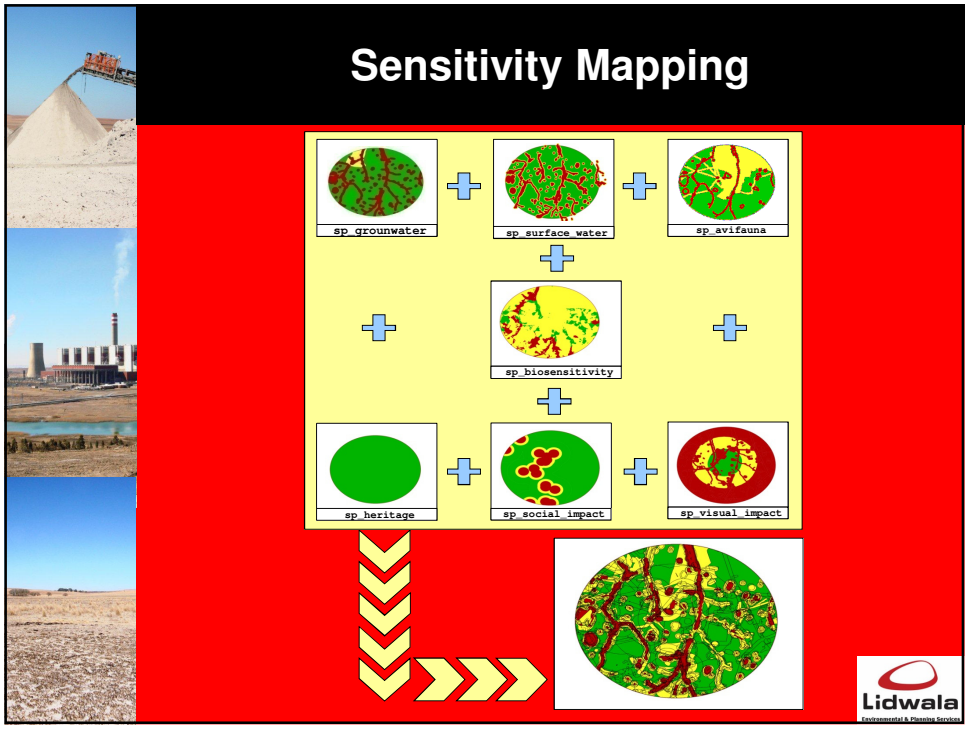
Lidwala
Environmental & Planning Services

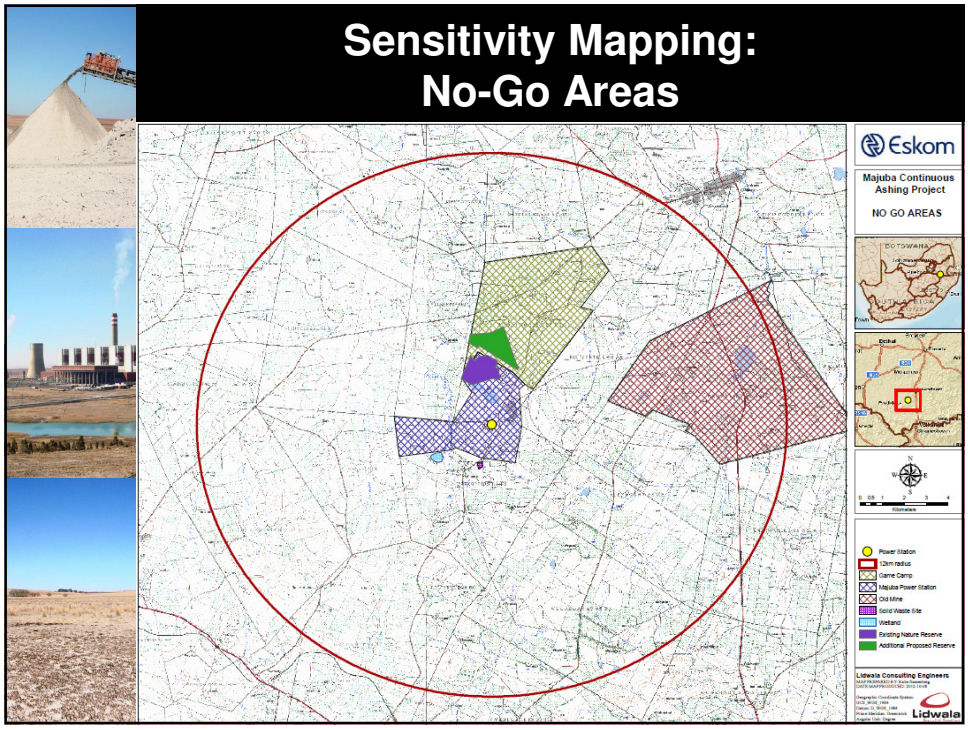
Envisaged Timeline

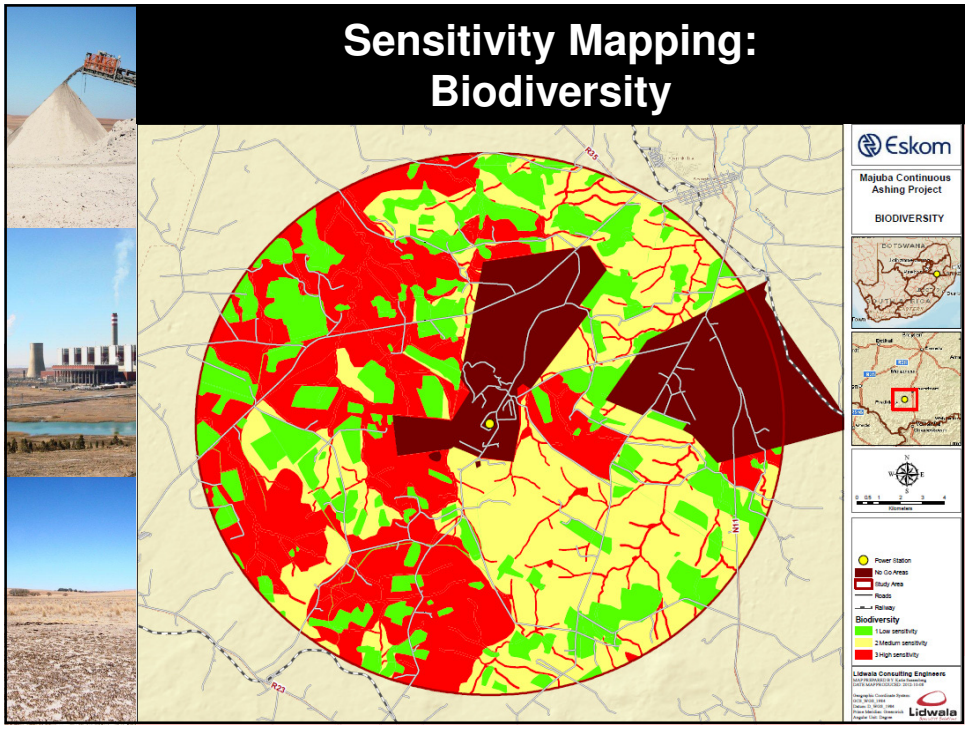
Phase / Task	Envisaged Date
Application form submission	August 2012
Screening / Scoping Phase	August 2012 – January 2013
EIA Phase	January – June 2013
Final Documents to DEA	June 2013
Authorisation and License	August 2013

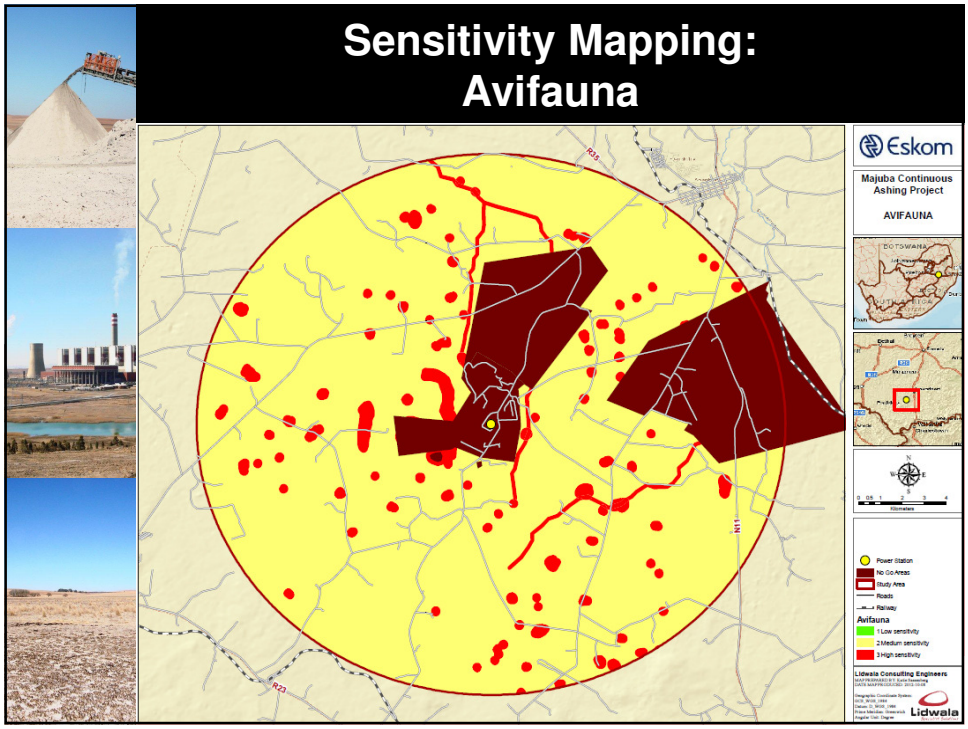
Sensitivity Mapping

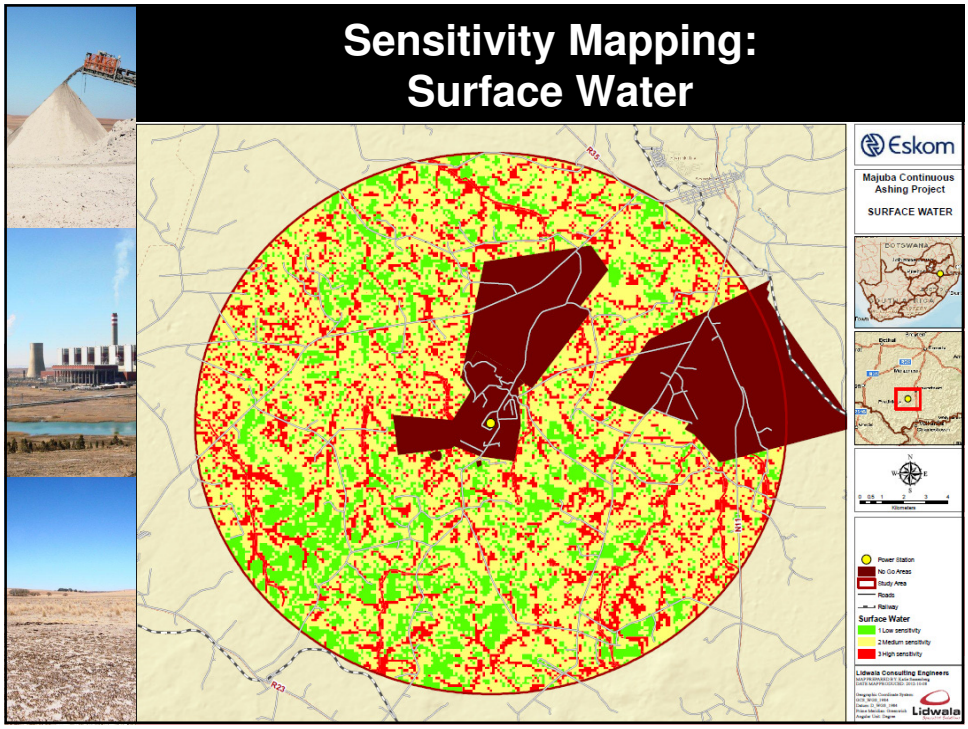
- Eskom have already identified an area for the proposed continuous ashing
- However - in order to allow for a robust environmental process all land within a radius of 12 km was assessed in order to:
  - Identify potential alternatives sites
  - Identify sensitive environmental aspects that may limit the suitability of all identified alternative sites

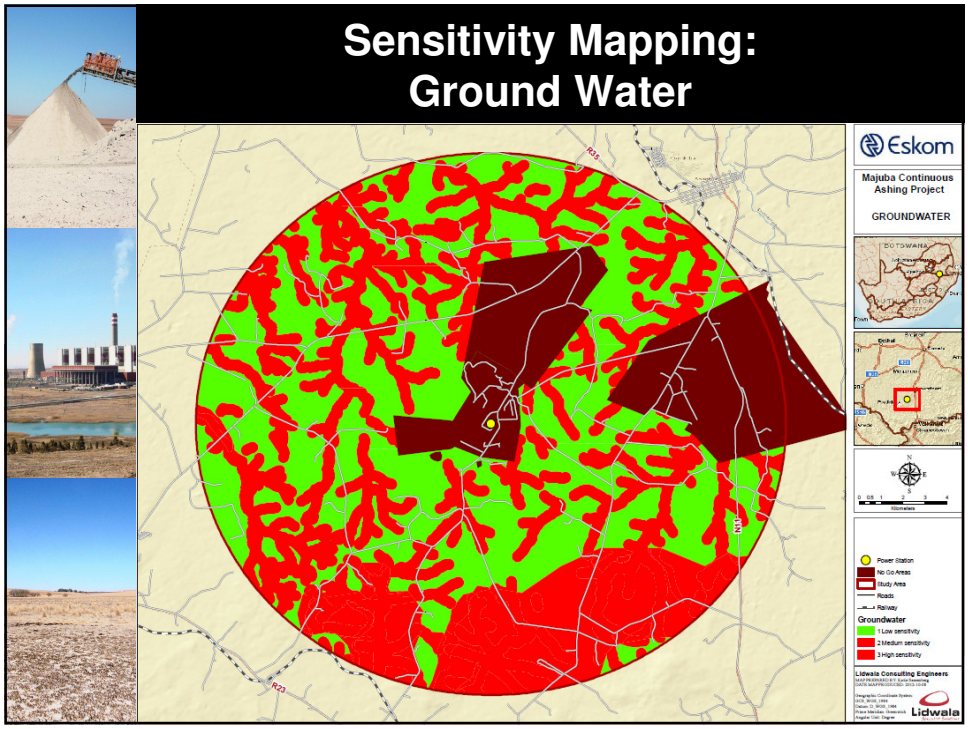

Sensitivity Mapping
sp_grounwater
sp_surface_water
sp_avifauna
sp_biosensitivity
sp_heritage
sp_social_impact
sp_visual_impact
Lidwala

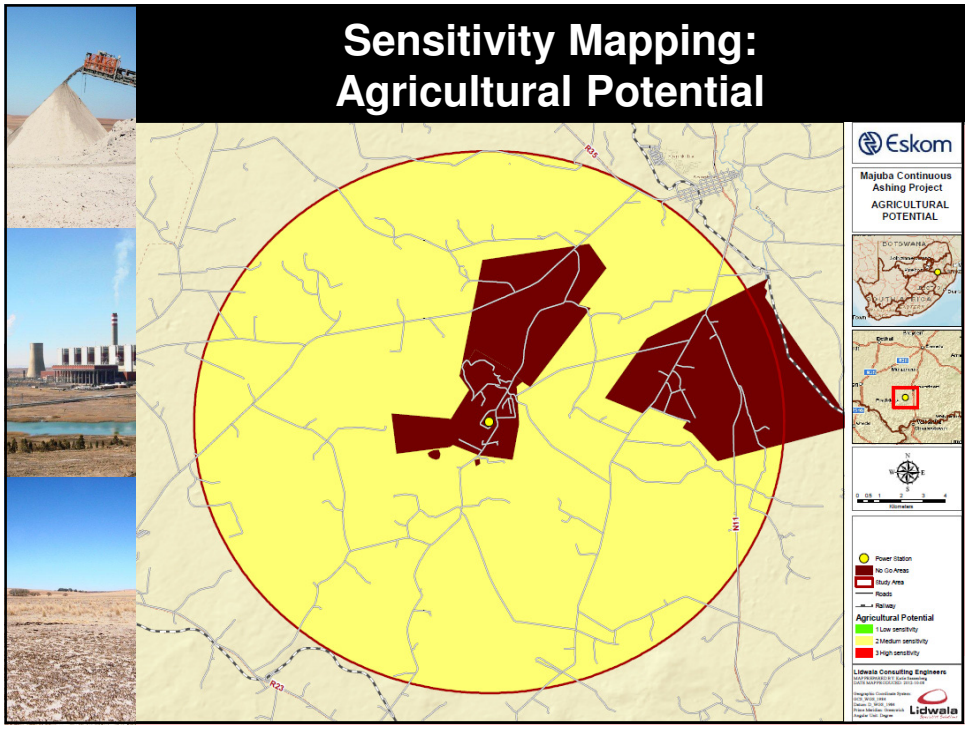

Sensitivity Mapping:
No-Go Areas
Eskom
Majuba Continuous Ashing Project
NO GO AREAS
Lidwala

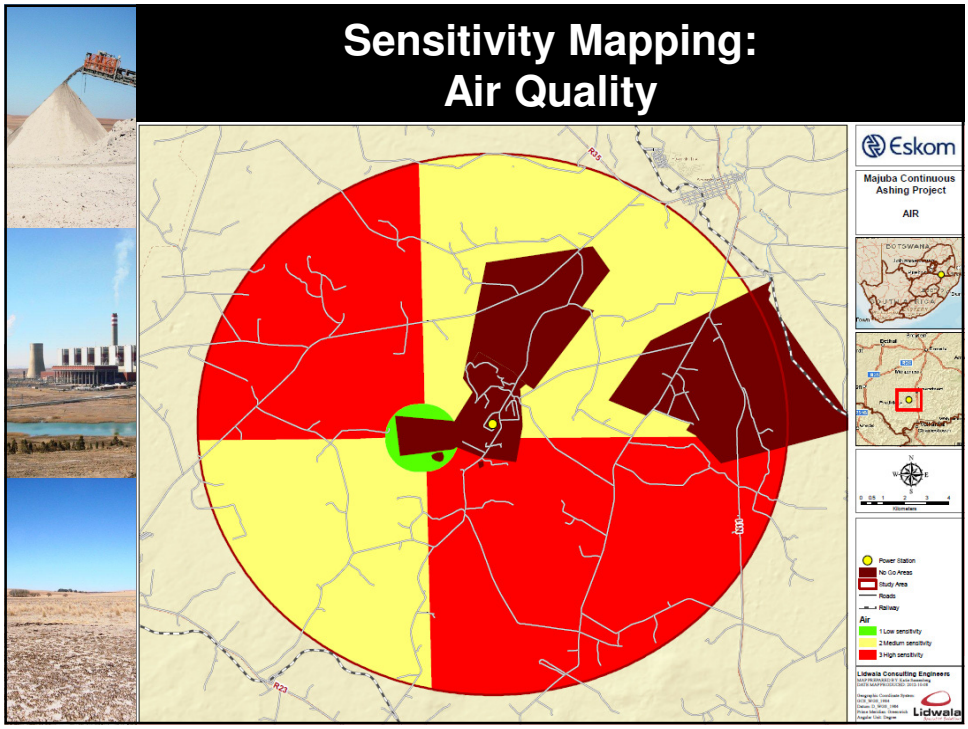

Sensitivity Mapping:
Biodiversity
Eskom
Majuba Continuous Ashing Project
BIODIVERSITY
Power Station
No Go Areas
Study Area
Roads
Railway
Biodiversity
1 Low sensitivity
2 Medium sensitivity
3 High sensitivity
Lidwala Consulting Engineers
Lidwala


Sensitivity Mapping:
Avifauna
Eskom
Majuba Continuous Ashing Project
AVIFAUNA
Power Station
No Go Areas
Study Area
Roads
Railway
Avifauna
1 Low sensitivity
2 Medium sensitivity
3 High sensitivity
Lidwala Consulting Engineers
Lidwala

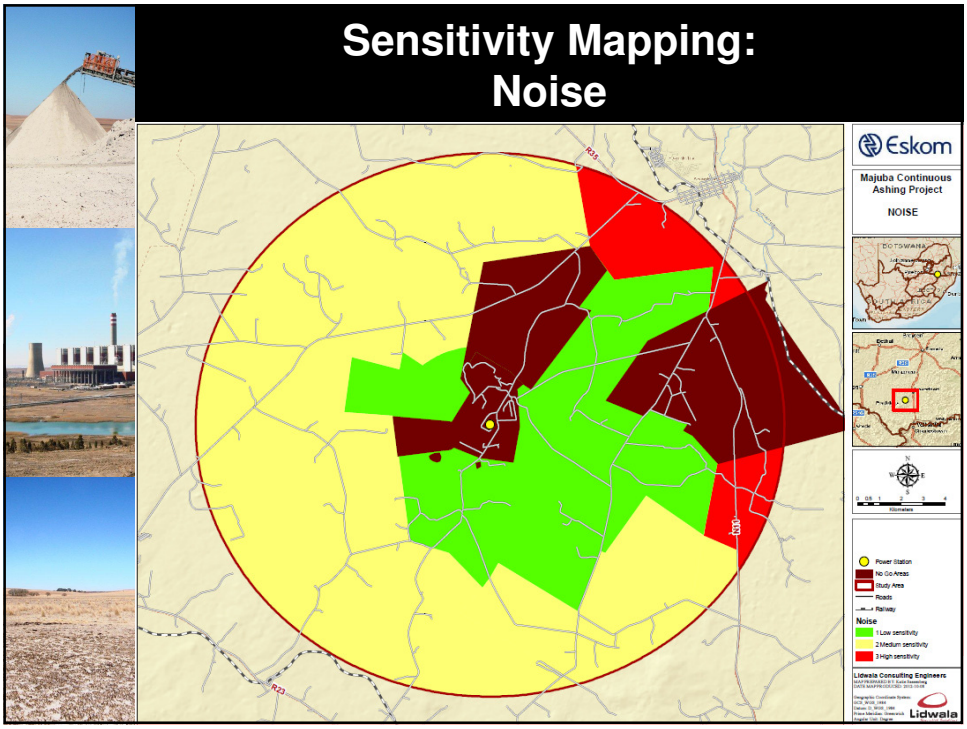

Sensitivity Mapping:
Surface Water
Eskom
Majuba Continuous Ashing Project
SURFACE WATER
Power Station
No Go Areas
Study Area
Roads
Railway
Surface Water
1 Low sensitivity
2 Medium sensitivity
3 High sensitivity
Lidwala Consulting Engineers
Lidwala


Sensitivity Mapping:
Ground Water
Eskom
Majuba Continuous Ashing Project
GROUNDWATER
Power Station
No Go Areas
Study Area
Roads
Railway
Groundwater
1 Low sensitivity
2 Medium sensitivity
3 High sensitivity
Lidwala Consulting Engineers
Lidwala

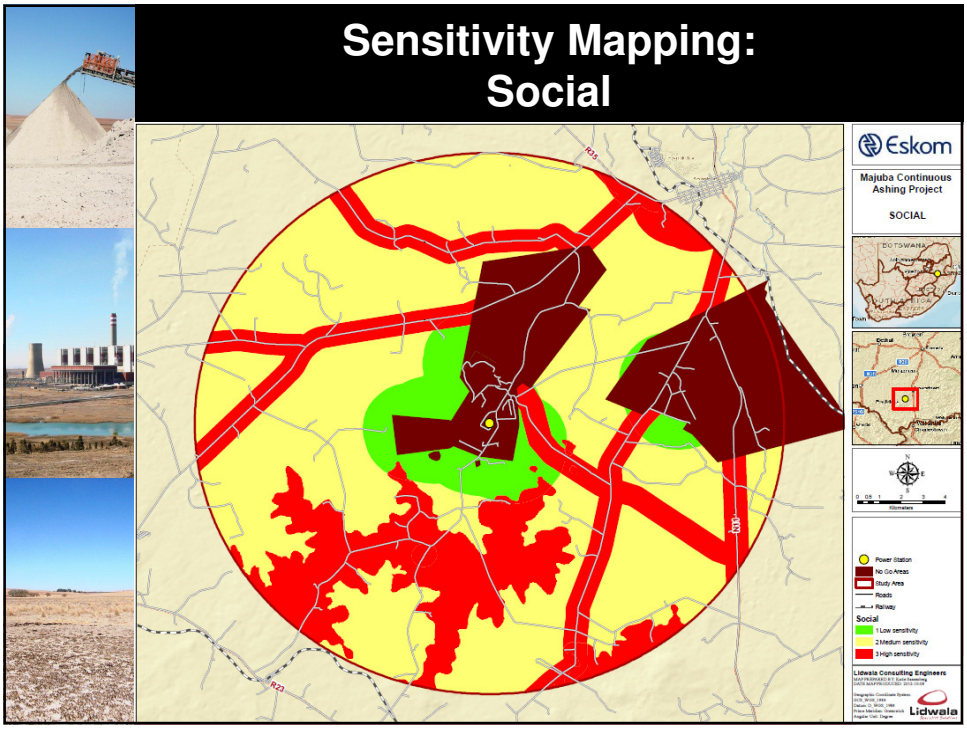

Sensitivity Mapping:
Agricultural Potential
Eskom
Majuba Continuous Ashing Project
AGRICULTURAL POTENTIAL
BOTSWANA
R33
N11
R23
Power Station
No Go Areas
Study Area
Roads
Railway
Agricultural Potential
1 Low sensitivity
2 Medium sensitivity
3 High sensitivity
Lidwala Consulting Engineers
Lidwala


Sensitivity Mapping:
Air Quality
Eskom
Majuba Continuous Ashing Project
AIR
BOTSWANA
R33
N11
R23
Power Station
No Go Areas
Study Area
Roads
Railway
Air
1 Low sensitivity
2 Medium sensitivity
3 High sensitivity
Lidwala Consulting Engineers
Lidwala

Sensitivity Mapping: Noise



Sensitivity Mapping: Social

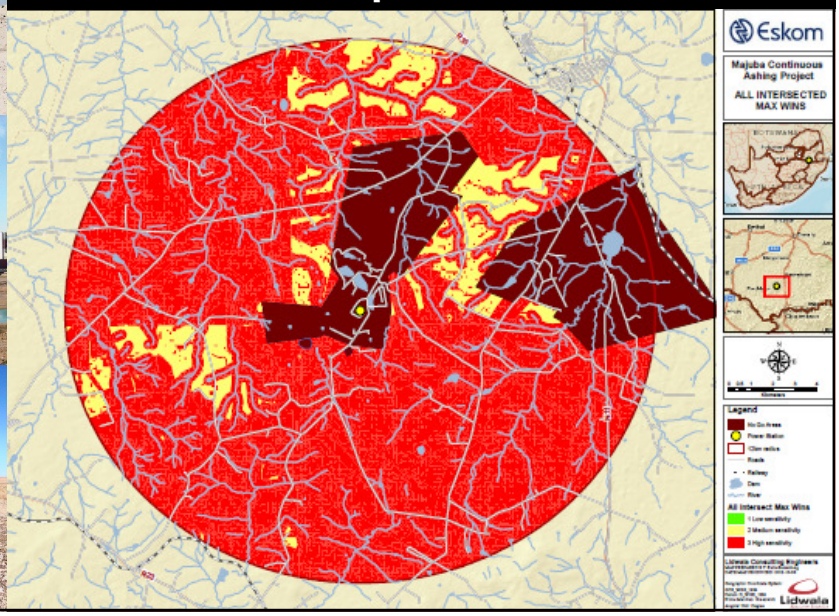


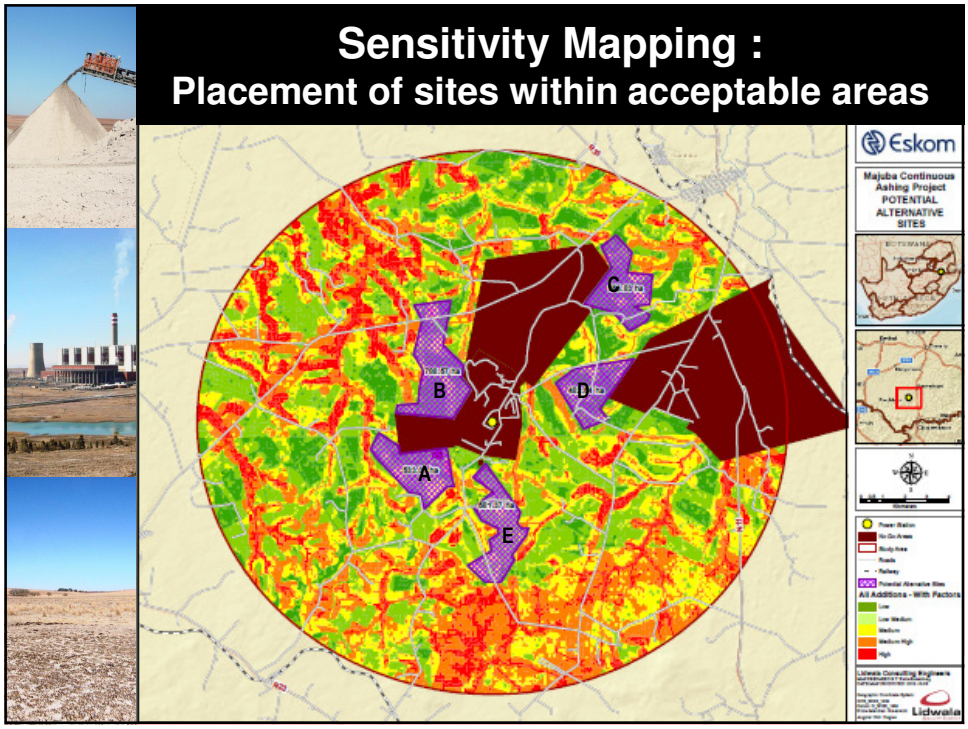
Sensitivity Mapping

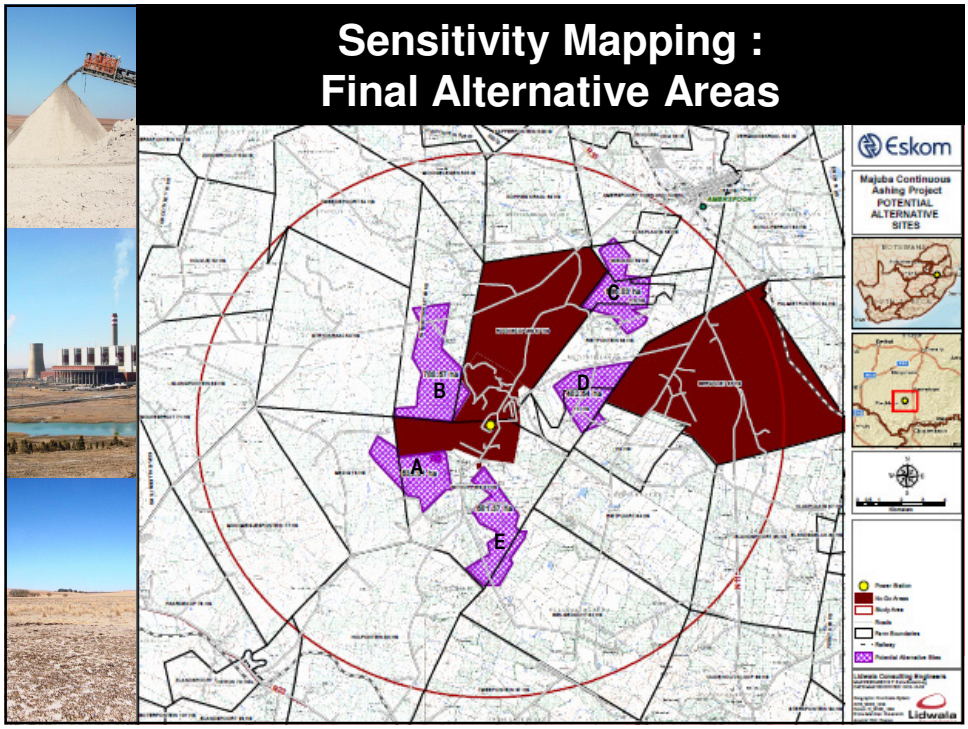
- In order to calculate a combined sensitivity rating for the study area, all the GIS layers received from each specialist area of study were combined to form one integrated layer
- Three results were then calculated from the integrated layer:
  - **maximum sensitivity wins:** The maximum sensitivity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

Lidwala

Sensitivity Mapping : Final Map – Max Wins




Sensitivity Mapping :
Placement of sites within acceptable areas
Eskom
Majuba Continuous Ashing Project
POTENTIAL ALTERNATIVE SITES
A
B
C
D
E
Lidwala


Sensitivity Mapping :
Final Alternative Areas
Eskom
Majuba Continuous Ashing Project
POTENTIAL ALTERNATIVE SITES
A
B
C
D
E
Lidwala

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.

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 project; and
  - Local, site-specific issues.

Conclusions and Recommendations

- 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 are most feasible for use
- 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

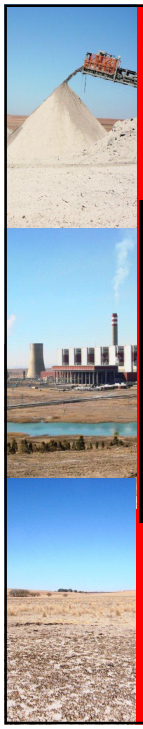
Presented by:
Bongi Mhlanga

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
  - Project advertised in 2 newspapers
    - The Record
    - 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

Lidwala Consulting Engineers (SA) (Pty) Ltd

Bongi Mhlanga / Nicolene Venter

Post: PO Box 32497, Waverley, 0135
Tel: (0861) LIDWALA (0861 543 9252)
Fax: 086 764 9282
E-mail: majubaeia@lidwala.com