ENVIRONMENTAL IMPACT ASSESSMENT – EIA PHASE

PROPOSED ESTABLISHMENT OF THE PUMPED STORAGE SCHEME AND ASSOCIATED INFRASTRUCTURE IN STEELPOORT AREA, LIMPOPO AND MPUMALANGA PROVINCES

FINAL MINUTES OF THE FOCUS GROUP MEETING WITH SEHLAKWANE & SURROUNDING COMMUNITIES

HELD ON WEDNESDAY 25 APRIL 2007 AT REHLAHLELWE PRIMARY SCHOOL
ENQUIRIES

Public Participation Process

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YOUR COMMENTS

Your comments on this document would be greatly appreciated. In particular, we request you to verify that your comments during the meeting have been minuted correctly. Please address your written comments to Sibongile Hlomuka at the address given above by not later than 4 July 2007. Please note however that the minutes are not verbatim.
# TABLE OF CONTENTS

1. PURPOSE OF THE MEETING ..........................................................................................................................................4

2. RATIONALE AND BACKGROUND TO THE PROPOSED PROJECT ..........................................................4

3. PUMPED STORAGE TECHNOLOGY .......................................................................................................................4

4. ENVIRONMENTAL STUDY REQUIREMENTS ........................................................................................................4

5. EIA PROCESS FOR PROPOSED PROJECT ...........................................................................................................5

6. WHY ARE ENVIRONMENTAL STUDIES NEEDED .............................................................................................5

7. EIA PROCES TO DATE ..........................................................................................................................................5

8. PUBLIC PARTICIPATION PROCESS .....................................................................................................................5

9. SITES INVESTIGATED .........................................................................................................................................5

10. AIMS OF THE SCOPING PHASE ..........................................................................................................................6

11. ASPECTS CONSIDERED IN AN EIA ....................................................................................................................6

12. ASSESSMENT OF IMPACTS .................................................................................................................................6

13. OVERALL CONCLUSION AND RECOMMENDATION .....................................................................................6

14. THE WAY FORWARD .........................................................................................................................................10

15. DISCUSSION SESSION ....................................................................................................................................11

16. CLOSURE ..........................................................................................................................................................11
APPENDICES

ATTENDANCE RECORD ................................................................................. Appendix A
PRESENTATION................................................................................................Appendix B
THE STRUCTURE OF THE MINUTES FOLLOWS THAT OF THE PRESENTATION

1. PURPOSE OF TODAY’S MEETING

- Provide Interested and Affected Parties (I&APs) and Key Stakeholders with information regarding the proposed Steelpoort Pumped-Storage Scheme (SPSS)
- Provide an overview of the Environmental Impact Assessment (EIA) & Public Participation Process (PPP) being followed for the proposed project
- Provide an opportunity for key stakeholders and I&APs to seek clarity and provide input into the project
- To record comments raised and include them in the final EIA Report
- Interaction with the project team

2. RATIONALE AND BACKGROUND TO THE PROPOSED PROJECT

- Eskom’s electricity generation capacity expansion was based on national policy and informed by on-going strategic planning undertaken by National Department of Minerals and Energy (DME), the National Energy Regulator of South Africa (NERSA) and Eskom.
- Integrated Strategic Electricity Planning (ISEP) identified the need for increased peaking supply by about 2006/7 and base load by about 2010.
- One way of achieving this is via pumped storage technology. The Braamhoek Scheme in the Drakensberg is one such scheme.
- The function of a pumped storage scheme (PSS) is to supply power during the time of peak demands and to ‘store’ surplus power during off-peak periods, which will be utilized later

3. PUMPED STORAGE TECHNOLOGY

- Typical PSS scheme consists
- Upper and lower reservoir
- Underground powerhouse complex
- Associated waterways linking reservoirs; and
- Associated infrastructure roads, transmission lines, admin building, visitors centre and link yard

4. ENVIRONMENTAL STUDY REQUIREMENTS

Application has been made under the new EIA Regulations.
The primary triggers are (according to R386 and R387):

- The construction of facilities or infrastructure, including associated structures or infrastructure, for:
  - 1(a) the generation of electricity where –
  - the electricity output is 20 megawatts or more; or
  - the elements of the facility cover a combined area in excess of 1 hectare.
- 1(g) The use, recycling, handling, treatment, storage or final disposal of hazardous waste;
- 1(h) the manufacturing, storage or testing of explosives, including ammunition,
- 1(n) the transfer of 20 000 cubic metres or more water between water catchments or impoundments per day
- Any development activity, including associated structures and infrastructure, where the total area of the developed area is, or is intended to be, 20 hectares or more;
- The construction of a dam where the highest part of the dam wall, as measured from the outside toe of the wall to the highest part of the wall, is 5 metres or higher or where the high water mark of the dam covers an area of 10 hectares or more;
- The construction of masts of any material or type of any height, including those used for telecommunication broadcasting and also transmission.

5. **EIA PROCESS FOR THE PROJECT**

- Phase 1: Environmental Scoping Study (ESS) including Screening Studies
- Phase 2: Environmental Impact Assessment (EIA)
- Phase 3: Environmental Management Plan (EMP)
- Public Participation Process – Ongoing throughout the EIA Process

6. **WHY ARE ENVIRONMENTAL STUDIES NEEDED**

- Identify and assess potential environmental impacts (biophysical & social)
- Propose mitigation & management measures
- Authorization from the National Department of Environmental Affairs and Tourism (NDEAT)
- Inform project planning process

7. **EIA PROCESS TO DATE**

- EIA Process
- Application
- Environmental Scoping Study
- Plan of Study for EIA
- Environmental Impact Assessment
- Record of Decision

8. **PUBLIC PARTICIPATION PROCESS**
• What is PPP?
  ▪ A tool to inform I&APs of a proposed project.
  ▪ A tool to help integrate the comments of the I&APs into the relevant phases of a proposed project.

• What PPP is Not?
  ▪ Not a Public Relations exercise
  ▪ Not a means to satisfy grievances – rather to record comments

8.1 PUBLIC PARTICIPATION PROCESS

➢ Approval of Final Scoping Report and Plan of Study for EIA
➢ Draft Environmental Impact Report for Public Review
➢ Focus Group Meetings
➢ Public Meetings
➢ Notify I&APs of Record of Decision

9. SITES INVESTIGATED

• Three alternative sites were investigated during the ESS
• The ESS has nominated a preferred site for further detailed investigation in the EIA phase

10. AIMS OF THE SCOPIX PHASE

• Identified & evaluated potentially significant environmental impacts (both positive and negative impacts)
• Validate Environmental Screening Report
• Evaluate site alternatives.
• Public Participation
  o Inform the public of the proposed project
  o Opportunity to raise concerns about and provide input into the project
• Nomination of a preferred site (Site A) for further investigation in the EIA phase
• (environmental, economic and technical issues account).
• Make recommendations regarding studies required within the detailed EIA.

11. AIMS OF EIA PHASE

• Rating of Significant Impacts
• Public Participation
• EIA consider the impacts throughout the entire project life cycle e.g
• Recommendations regarding mitigation and management of significant impacts
• Draft Environmental Management Plan

12. ASPECTS CONSIDERS IN THE EIA

• Biophysical Aspects
  • Geology
  • Soils and Agricultural potential
  • Geohydrology
  • Surface Water and drainage
  • Wetlands
  • Biodiversity

• Social Aspects
  • Archaeology and Heritage
  • Visual
  • Noise
  • Social
  • Traffic
  • Tourism

ASSESSMENT OF IMPACTS

• GEOLOGY

  • Very good rock conditions for underground works.
  • Construction materials available within the dam basin.
  • Clay material for the lower dam core is available in close proximity.
  • Steelpoort Fault does not impact the site.
  • No fatal flaws were discovered
  • Further investigations will be required

• SOIL AND AGRICULTURAL POTENTIAL

  • Reservoir sites consist of shallow soils with deeper alluvial soils.
  • No areas with high agricultural potential occur within reservoir sites.
• Additional Roads are already existing routes
• Impacts on soils and agricultural potential is low
• Construction villages & temporary developments – land rehabilitated.

• GEOHYDROLOGY (GROUND WATER)
  • Study area is classified as minor-aquifer system due to rock complex.
  • Therefore no large scale groundwater abstraction occurs.
  • Intercepting water bearing fractures considered as a short-term negative impact
  • Grouting these structures will prevent long-term impacts.
  • The medium negative impact will be reduced to a very low negative impact with appropriate mitigation.

• SURFACE WATER AND DRAINAGE
  • The study has found no fatal flaws
  • Negative impacts – construction
  • burrowing, housing, sewage, and water abstraction),
  • Impacts are localised.
  • Impacts can all successfully be mitigated,
  • The high negative impact can be reduced to a medium negative impact with appropriate mitigation

• WETLANDS
  • No wetlands occur within the footprint
  • Therefore no loss of physical wetland habitat
  • Indirect positive benefit on wetlands in the upper catchment, Sehlakwane.
  • If wetlands and associated buffers are not affected the impact will be very low.

• BIODEVERSITY
  • Impacts - transformation of large tracts of natural and sensitive environment
  • Although cannot be mitigated effectively,
  • Impacts - localised and site specific & contained within a relatively small area.
  • Constant environmental monitoring
  • Periodic bio-monitoring - invasive species.
  • Appropriate mitigation measures reduce high negative impact - low medium impact

• ARCHAEOLOGICAL & HERITAGE
  • Sites dating to the Late Iron Age, Early Historic Period were identified
  • Current legislation allows for mitigation measures.
  • Impacts lessened by:
    o Rerouting/relocating of access routes, construction yards, etc.
Formalising sites by fencing them off
Excavation and mapping of sites.

- Development can continue, if the mitigation measures for each identified site are implemented

**VISUAL**
- The escarpment-like topography - very high visual quality.
- The visual impact adverse, the significance very high-medium.
  - Localised and associated with proximity to the site.
- Lighting - important visual impact (construction)
  - Design specific mitigation measures.
- Visual impacts associated with the project are unavoidable, No fatal flaw
- Appropriate mitigation measures reduce high negative impact - medium negative impact.

**NOISE**
- Acceptable construction related noise impacts are expected.
- Operational noise impact - fairly small.
- Any impacts - contained within 300m of the PSS.
- No operational noise impacts at Sehlakwane Village.
- Additional noise from traffic will be insignificant.
- Supported from a noise perspective.

**SOCIAL**
- Operational & Construction phases have positive impacts,
- These relate to sustainable development-
  - employment opportunities (directly and indirectly)
  - infrastructure development.
- Enhanced direct employment opportunities
  - transparent recruitment process.
  - enable all unskilled labour to have an equal opportunity of employment
- Negative impacts - construction/decommissioning phases.
- Negative impacts can be mitigated successfully
- Intra-conflict
  - Forum meetings contractors & construction workers- address issues and concerns pro-actively.
  - Consider the use of a uniformed salary structure whilst construction workers are on site.
- Inter-conflict:
  - Transparent recruitment process takes place.
  - Local trade unions, to enhance the recruitment process.
- Construction villages location is appropriate
- Increased social problems (construction site) controlled:
o HIV/AIDS awareness campaign
o Controlled Access

- Safety hazards of water- PSS fenced and access controlled
- Local economic investment - use of the local facilities
- Sustainable local economic development
  o Enhance the positive impact by encouraging installation employees to make use of and employ local community members in their households
- The positive impacts of the project outweigh the negative social impacts

- TRAFFIC

- Transport of components, the construction traffic and operational traffic - medium negative impact.
- Medium impact a low weighting.
- Benefits far outweigh the considered Low impact of the transport/traffic.
- Supported from a traffic and transport perspective.
- Mitigation measures reduce the overall impact to a Low Medium negative impact

- TOURISM

- Negative impacts: to loss of sense of place-
  o construction
  o lesser extent -operational phase.
- Greatest negative impact on - game reserves construction camp and the construction traffic.
- Overall impact- positive during construction and operation - increased business tourism

13. OVERALL CONCLUSION AND RECOMMENDATIONS

- Positive and negative impacts were identified
- No environmental fatal flaws were identified
- Supported from an Environmental perspective.
- All impacts can be adequately mitigated.
- An Environmental Management Plan (EMP) has been compiled and released for public review
- EMP details mitigation and management measures - environmental issues during construction and operation.

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<tr>
<th>POTENTIAL IMPACT</th>
<th>SIGNIFICANCE</th>
<th>SIGNIFICANCE After Mitigation</th>
<th>STATUS</th>
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<td>Negative</td>
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<td>Soils and Agricultural Potential</td>
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<tr>
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14. THE WAY FORWARD

- Compilation and distribution of minutes
- Inclusion of I&AP comments in Final Environmental Impact Report
- Submission of Final Environmental Impact Report to National & Provincial Authorities
- Authority review
- Environmental Authorisation
- Notify I&APs of Decision
- Appeal Period

15. DISCUSSION SESSION

On the observation that there was a poor attendance and unavailability of a venue, there were discussions on whether the meeting should proceed or be postponed. It was agreed that the meeting be postponed, but discussions could be held with the present people. The date for this meeting was re-scheduled for 15 May 07, at 15H00, and the venue to be confirmed. As such Mr Magangane presented to those present about the project. The discussion below is a result of this presentation:
1. Mr. MJ Masemola, community member, enquired about the health impact that might be caused by the project during construction phase.
Mr Greg Seymour, Bohlweki Environmental, responded that there are no significant health impacts as the dam is a few kilometres from the community. The roads upgrade through the community land will have temporary insignificant impacts, as they will be mitigated against, but those are not health related, rather safety and socio-economically related.

2. Mr. MJ Masemola, community member, enquired about employment opportunities during construction phase.
Mr Frans Mapulane, Eskom Generation responded that there will be opportunities for the community. He explained that access to these opportunities will be through a robust process which will ensure that every job-seeker will have an equal opportunity as others.

3. Chief BA Mahlangu enquired about the purpose of the EIA report to be distributed.
Mr. Gift Magangane, Bohlweki Environmental responded that, the report is an outcome of some studies and processes that have been followed as required before the project is undertaken. The EIA report it intended for public review so as to comment and raise issues and/or concerns that were not dealt with appropriately and to add on what is already contained in the report.

4. Ms. Nontombi Manyaka, community member, enquired if the local municipality had been consulted regarding the project.
Mr. Thomas Mashagoane, community councillor, responded that the municipality was consulted. He further explained that the reason for the community not knowing about this meeting (as only a few people were present instead of a bigger community) was a communication breakdown between the councillors and the community.

5. Mr. Thomas Mashagoane, community councillor, enquired about the connection of De Hoop dam and Steelpoort Pumped storage Scheme.
Mr. Gift Magangane, Bohlweki Environmental-responded that the dam belongs to the Department of Water Affairs and Forestry and it is going to supply water to the pumped storage scheme.

6. Ms. Grace Mokoana, community member- enquired about the commencement date for construction.
Mr. Gift Magangane, Bohlweki Environmental responded that the construction of the project will commence in mid-2008 and finish at the end of 2014.

7. Mr. MJ Masemola, community member-enquired about the contact person from Eskom whom the community can regarding the tenders of the project.
Mr Frans Mapulane, Eskom Generation responded that there will be a tender advertisement in papers.

8. Ms. Nontombi Manyaka, community member enquired about the employment opportunities in terms of the community members acquiring new skills.
Mr Frans Mapulane, Eskom Generation responded that skill transfer is one of the strategies used when selecting the community members for job opportunities. Hence, those community members employed will be skilled such that they can utilise their skills elsewhere or in other developmental projects in their area.

16. CLOSURE

In the absence of further points of discussion, Mr. Greg Seymour thanked everyone for their attendance and contributions.
The meeting was concluded at 17h00
APPENDIX A

ATTENDANCE RECORD
APPENDIX B

TECHNICAL PRESENTATION

Gift Magangane
ENVIRONMENTAL IMPACT ASSESSMENT PROCESS:
PROPOSED STEELPORT PUMPED STORAGE SCHEME IN LIMPOPO AND MPUMALANGA PROVINCES

CONDUCT OF THE MEETING

- Language of choice
- Work through facilitator
- Focus on issues
- Equal participation from all parties
- Identify yourselves prior to question - for minute taking purposes
- Please wait until the discussion session to ask questions

PURPOSE OF TODAY'S MEETING

- Provide Interested and Affected Parties (I&APs) and Key Stakeholders with information regarding the proposed Steelport Pumped-Storage Scheme (SPSS)
- Provide an overview of the Environmental Impact Assessment (EIA) & Public Participation Process (PPP) being followed for the proposed project
- Provide an opportunity for key stakeholders and I&APs to seek clarity and provide input into the project
- To record comments raised and include them in the Final EIA Report
- Interaction with the project team

BASIC INFORMATION RELATING TO THE PROPOSED PROJECT

Edison’s electricity generation capacity expansion was based on national policy and informed by on-going strategic planning undertaken by National Department of Minerals and Energy (DM&E), the National Energy Regulator of South Africa (NERSA) and Edison.

Integrated Strategic Electricity Planning (ISEP) established the need for increased peaking supply by about 2006/7 and base load by about 2010.

One way of achieving this is via pumped storage technology. The Broommock Scheme in the Drakensberg is one such scheme.

The function of a pumped storage scheme (PSS) is to supply power during the time of peak demands and to store surplus power during off-peak periods, which will be utilised later.

Typical PSS scheme consists
- Upper and lower reservoir
- Underground powerhouse complex
- Associated waterways linking reservoirs and
- Associated infrastructure roads, transmission lines, admin building, visitors centre and linkway
**Pumped Storage Technology**

- Dukiesberg Pumped Storage Scheme

**Environmental Study Requirements**

- The transfer of 20,000 cubic metres or more of water between water catchments or impoundments per day
- Any development activity, including associated structures and infrastructure, where the total area of the developed area is, or is intended to be, 20 hectares or more
- The construction of a dam where the highest part of the dam wall, as measured from the outside toe of the wall to the highest part of the wall, is 5 metres or higher or where the high water mark of the dam covers an area of 10 hectares or more
- The construction of masts of any material or type of any height, including those used for telecommunication broadcasting and also transmission

**Why Are Environmental Studies Needed?**

- Identify and assess potential environmental impacts (biophysical & social)
- Propose mitigation & management measures
- Authorisation from the National Department of Environmental Affairs and Tourism (NDEAT)
- Inform project planning process

**EIA Process to Date**

- Application
- Environmental Scoping Study
- Plan of Study for EIA
- Environmental Impact Assessment
- Record of Decision
PUBLIC PARTICIPATION PROCESS

- What is PPP?
  - A tool to inform I&APs of a proposed project.
  - A tool to help integrate the comments of the I&APs into the relevant phases of a proposed project.
- What PPP is Not?
  - Not a Public Relations exercise
  - Not a means to satisfy grievances - rather to record comments

SITES INVESTIGATED

- Three alternative sites were investigated during the EIS.
- The EIS has nominated a preferred site for further detailed investigation in the EIA phase.

PREFERRED SITE

- nominated a preferred site (Site A) for further investigation in the EIA phase (environmental, economic and technical issues account).
- Make recommendations regarding studies required within the detailed EIA.
ALRM OF EIA PHASE

- Rating of Significant Impacts
- Public Participation
- EIA consider the impacts throughout the entire project life cycle e.g.
  - Impact
  - Construction Phase
  - Operational Phase
  - Decommissioning Phase
- Recommendations regarding mitigation and management of significant impacts
- Draft Environmental Management Plan

ASSESSMENT OF IMPACTS

Geology

- Very good rock conditions for underground works
- Construction materials available within the dam basin
- Clay material for the lower dam core is available in close proximity
- Strike/ dip: Fault does not impact the site
- No fatal flaws were discovered
- Further investigations will be required

ASSESSMENT OF IMPACTS

Soils & Agricultural Potential

- Reservoir sites consist of shallow soils with deeper alluvial soils
- No areas with high agricultural potential occur within reservoir sites
- Additional roads are already existing routes
- Impacts on soils and agricultural potential is low
- Construction villages & temporary developments - land rehabilitated

ASSESSMENT OF IMPACTS

Surface Water & Drainage

- The study has found no fatal flaws
- Negative impacts - construction burrowing, housing, sewage, and water obstruction
- Impacts are localised
- Impacts can all successfully be mitigated
- The high negative impact can be reduced to a medium negative impact with appropriate mitigation
ASSESSMENT OF IMPACTS - Biological

- No wetlands occur within the footprint
- Therefore no loss of physical wetland habitat
- Indirect positive benefit on wetlands in the upper catchment, Selilekane
- If wetlands and associated buffers are not affected the impact will be very low.

ASSESSMENT OF IMPACTS - Ecological and Environmental

- Sites dating to the Late Iron Age, Early Historic Period were identified
- Current legislation allows for mitigation measures
- Impacts lessened by:
  - Recruiting/relocating of access routes, construction yards, etc.
  - Formalising sites by fencing them off
  - Excavation and mapping of sites
- Development can continue, if the mitigation measures for each identified site are implemented

ASSESSMENT OF IMPACTS - Visual

- The escarpment-like topography- very high visual quality.
- The visual impact adverse, the significance very high-medium.
- Localised and associated with proximity to the site
- Lighting - important visual impact (construction)
- Design specific mitigation measures.
- Visual impacts associated with the project are unavoidable, No fatal flaw
- Appropriate mitigation measures reduce high negative impact - medium negative impact.

ASSESSMENT OF IMPACTS - Social

- Acceptable construction related noise impacts are expected.
- Operational noise impact - fairly small.
- Any impacts - contained within 300m of the PS5
- No operational noise impacts at Selilekane Village
- Additional noise from traffic will be insignificant.
- Supported from a noise perspective.

ASSESSMENT OF IMPACTS - Economic

Operational & Construction phases have positive impacts
- These relate to sustainable development
  - employment opportunities (directly and indirectly)
  - infrastructure development.
- Enhanced direct employment opportunities
- transparent recruitment process
- enable all unskilled labour to have an equal opportunity of employment
- Negative impacts - construction/decommissioning phases.
- Negative impacts can be mitigated successfully.
ASSESSMENT OF IMPACTS
Social Issues

- Intra-conflict
  - Forum meetings contractors & construction workers - address issues and concerns proactively.
  - Consider the use of a uniformed salary structure whilst construction workers are on site.
- Inter-conflict:
  - Transparent recruitment process takes place.
  - Local trade unions, to enhance the recruitment process.
  - Construction villages located is appropriate
  - Increased social problems (construction site) controlled
  - HIV/AIDS awareness campaign
  - Controlled Access

ASSESSMENT OF IMPACTS
Safety Issues

- Safety hazards of water - PSS fenced and access controlled
- Local economic investment - use of the local facilities
- Sustainable local economic development
  - Enhance the positive impact by encouraging installation employees to make use of and employ local community members in their households
  - The positive impacts of the project outweigh the negative social impacts

ASSESSMENT OF IMPACTS
Traffic

- Transport of components, the construction traffic and operational traffic - medium negative impact.
- Medium impact a low weighting.
- Benefits far outweigh the considered low impact of the transport/traffic.
- Supported from a traffic and transport perspective.
- Mitigation measures reduce the overall impact to a Low Medium negative impact

ROAD ALTERNATIVES

ASSESSMENT OF IMPACTS
Tourism

- Negative impacts: to loss of sense of place - construction
  - lesser extent - operational phase.
- Greatest negative impact on - game reserves, construction camp and the construction traffic.
- Overall impact: positive during construction and operation - increased business tourism.
OVERALL CONCLUSIONS AND RECOMMENDATIONS

- Positive and negative impacts were identified.
- No environmental fatal flaws were identified.
- Supported from an Environmental perspective.
- All impacts can be adequately mitigated.
- An Environmental Management Plan (EMP) has been compiled and released for public review.
- EMP details mitigation and management measures - environmental issues during construction and operation.

ASSESSMENT OF IMPACTS - Construction

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<td>Geology</td>
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<td>Negligible</td>
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<tr>
<td>Noise</td>
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<td>Medium</td>
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<tr>
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WAY FORWARD

- Compilation and distribution of minutes
- Inclusion of L&AP comments in Final Environmental Impact Report
- Submission of Final Environmental Impact Report to National & Provincial Authorities
- Authority review
- Environmental Authorisation
- Notify L&APs of Decision
- Appeal Period

Thank You

DISCUSSION SESSION

[Image of a discussion session]