MATIMBA B (MEDUPI) TRANSMISSION INTEGRATION PROJECT

MATIMBA B-DELTA 400KV TRANSMISSION POWER LINES, MATIMBA B SUBSTATION, DELTA SUBSTATION

ENVIRONMENTAL IMPACT ASSESSMENT

SCOPING REPORT

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EXECUTIVE SUMMARY

Introduction and Background:

The Delta Substation (SS) and the 4 x 400kV lines linking it to the new Matimba B Power Station (PS), now called Medupi PS, form part of Eskom's 20-year plan to integrate new power generation facilities in the Waterberg area (Matimba B PS and Mmamabula PS in Botswana) into the South African National Grid. This report follows closely on the publication (January 2007) of the Scoping Report for the Mmamabula-Delta 4 x 400kV line project, and an Addendum to the Scoping Report (March 2007).

A considerable level of public consultation has already taken place on this project, particularly regarding the location of the Delta SS.

The location of Delta SS and the 4 x 400kV lines linking it to the Matimba PS have also been included in the Mmamabula – Delta Scoping Report that was issued in January 2007. The study area for this project lies entirely within the study area for the Mmamabula-Delta lines. Therefore this Scoping Report does not intend to repeat all the specialist studies that have already been reported, nor will it repeat the wider motivation and 20-year plan for the integration of Matimba B PS and Mmamabula PS into the South African network.

This project forms part of the larger project to transmit the power received from Matimba B PS to Eskom's Transmission Network. Other Eskom Transmission Projects in the area include 4 x 400kV transmission power lines from Mmamabula PS in Botswana to Delta SS, 6 x 765kV transmission power lines from Delta SS to Epsilon SS near Potchefstroom and the construction of the Epsilon Substation.

Studies for other lines close to the study area include 2 x 400kV transmission power lines from Matimba B Power Station to Dinaledi SS (Brits) via Spitskop SS (near Northam) and 1 x 400kV transmission power line from Matimba B to Marang SS (near Rustenburg).

Approach to Study:

It is anticipated that a full EIA process will be applicable for this project. This includes:

- The Scoping Phase – targeted for completion by end May 2007, and
- the EIA Phase – targeted for completion by end July 2007.

These timeframes are more in line with the study timeframes for the Mmamabula-Delta EIA study. The full EIA process is being carried out in accordance with Regulations 27 to 36 compiled in terms of section 24(5) read with section 44 of the National Environment Management Act No.107 of 1998.

The timelines and deliverables on this project will impact on the overall project timelines. The achievement of these deadlines will require that the EIA consultant adheres to deadlines, and also that the authorities assist in minimising document review timeframes.

The scoping phase was utilised for researching the study area, identifying preliminary power line corridors and substation sites, and identifying issues relevant to the study. In essence the scoping phase is used to 'scope' potential corridors for the power transmission lines and potential substation sites. This Scoping Study has also drawn on the studies and consultation that has taken place during the Scoping phase of the Mmamabula-Delta EIA.

Physical Detail of Project:

The footprint of the substation is expected to be smaller than 1km x 1km (=100ha). This area is therefore being used as the maximum likely footprint in this EIA. Much of the internal infrastructure will be less than 20m high, comprising the lattice steel structures, cabling and transformers typical of a Transmission substation. A communications mast will also be installed within the yard area.

Matimba B Substation will be located within the site of the power station on the farm Naauw Ontkomen 509LQ, and will include both 132kV and 400kV supply. The size and layout of the Matimba B substation is expected to be similar to the layout at the existing Matimba Power Station. The substation will merely be an extension of the new power station infrastructure.

The proposed 400kV cross-rope pylons are normally 38m in height with a minimum conductor clearance of 8.1m. The standard servitude size for 400kV transmission power lines is 55m and towers are placed between 350m and 500m apart over the power line length depending on terrain and route angles. If two 400kV lines run parallel to the other, the minimum servitude size will be 110m.

Motivation for Project:

The predicted shortfall in generation capacity in South Africa is well publicised and the Department of Minerals and Energy (DME), along with Eskom and the private sector, are working toward generating an average additional 1200 to 1500MW per annum for the next 15 to 20 year to match the anticipated growth in electricity demand.

The coal reserves in the Waterberg Coal Fields form a substantial part of Eskom's 20-year plan and the Mmamabula Coal Bed is an extension of the Waterberg Coal Field into Botswana. A new power station called Mmamabula will be built near the town of Mahalapye in Botswana. It will sell up to 90% of its generating capacity to South Africa.

The network set out in Eskom's 20-year plan (see Figure 1 in main report) has been designed to optimise the transmission of electricity between new power stations in the Waterberg coal fields to electricity load growth centres to the south.

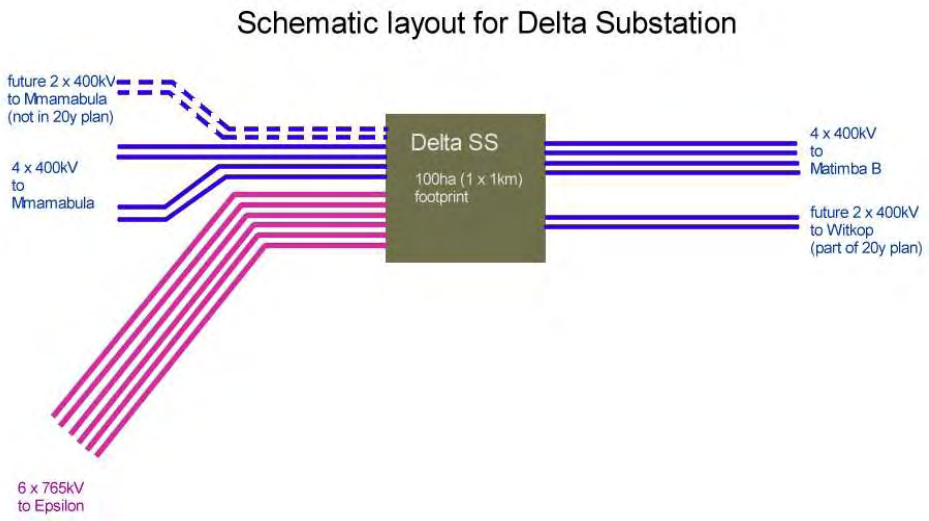
Delta SS is one of the central features as it will receive electricity from both new power stations and deliver it south to the National Grid via 6 x 765kV lines to a new substation called Epsilon, located near Potchefstroom and Klerksdorp. The Transmission integration studies indicate that the optimal solution that will minimise the overall number of power lines from Mmamabula and Matimba B (Medupi) power stations is the coupling of the two power stations at Delta SS.

Alternatives:

Much of the fieldwork was undertaken during the Mmamabula-Delta Scoping study has helped provide a basis for the identification of possible sites for Delta SS and power line corridors. Input from the public consultation process has supplemented this assessment and the main factors considered in identifying substation site and power line corridor alternatives included:

- Current land use as determined by aerial flyovers and aerial photographs, as well as input from stakeholders (both mining companies and landowners). Differentiation between grazing land and game farming/lodge facilities has not been confirmed in all cases thus far.
- The presence of the Eenzaamheid fault line as an indicator of the southern extent of coal resources and runs through the study area from east to west.

- Borehole records for coal prospecting were also used where relevant, though the data received from the Council for Geosciences has since been called into question.
- Information contained in specialist reports presented in the Mmamabula-Delta Scoping Report.
- Information contained in the Addendum to the Scoping Report for the Mmamabula-Delta EIA.
- The 20-year strategic plan for the Eskom Transmission network expansion in this area.
- Outcome of public meetings but particularly those of 10 February, 13 April and 14 April 2007.



Initial investigations identified a number of possible substation locations as is shown in Figure 5.1 in the main report.

The location of Delta SS needs to consider both the size of the substation, the number of lines connecting to it and their direction. Within the 20-year plan a total of 16 power lines will connect to Delta SS. To accommodate these lines a substation area of almost 100ha will be needed.

From the schematic above, the largest size and number of lines (6 x 765kV) will run southwards. The others will run east and west. Therefore the location of Delta SS north of Matimba B PS will need to accommodate these lines. Furthermore, unless the substation is located some distance from Matimba B, any location north will place the substation within mining land or over coal reserves.

Motivation for each of the sites and corresponding transmission power line corridor is provided in the main report herebelow. The impacts of the power lines will be dependent on the location of the Delta Substation. This, in turn, will be influenced by the location of the lines to Mmamabula. The assessment will be done in conjunction with the assessment of the proposed power lines to Mmamabula.

MATIMBA B-DELTA
4 X 400KV TRANSMISSION POWER LINES,
MATIMBA B SUBSTATION,
DELTA SUBSTATION

ENVIRONMENTAL IMPACT ASSESSMENT

SCOPING REPORT

1. INTRODUCTION

The Delta Substation (SS) and the 4 x 400kV lines linking it to the new Matimba B Power Station (PS), now called Medupi PS, form part of Eskom's 20-year plan to integrate new power generation facilities in the Waterberg area (Matimba B PS and Mmamabula PS in Botswana) into the South African National Grid. This report follows closely on the publication (January 2007) of the Scoping Report for the Mmamabula-Delta 4 x 400kV line project, and an Addendum to the Scoping Report (March 2007).

A considerable level of public consultation has already taken place on this project, particularly the location of Delta SS. A number of issues have been raised, including:

- Suspicion that Eskom has already identified the farm Zandnek as the preferred site,
- The Environmental Impact Assessment (EIA) for the substation should be brought in line with the EIA for the lines from Delta to Mmamabula,
- Delta should be located as close to Matimba B (Medupi) PS as possible.

The location of Delta SS and the 4 x 400kV lines linking it to the Matimba PS have also been included in the Scoping Report (January 2007). The study area for this project lies entirely within the study area for the Mmamabula-Delta lines. Therefore this Scoping Report does not intend to repeat all the specialist studies that have already been reported, nor will it repeat the wider motivation and 20-year plan for the integration of Matimba B PS and Mmamabula PS into the South African network.

Instead this report sets out to focus entirely on the work undertaken thus far in the Scoping studies, and in particular the potential alternatives regarding the location of Delta and the 4 x 400kV lines.

1.1. ENVIRONMENTAL AUTHORITY DATA

The study area falls in the Limpopo province. The lead authority is the national Department of Environmental Affairs and Tourism (DEAT) who will issue the final Record of Decision (RoD) for this EIA-project. However, all correspondence will be copied to the office of the Limpopo Department of Economic Development, Environment and Tourism and the case officer will be invited to all meetings and site visits where applicable. The EIA project reference numbers for DEAT and the provincial office are listed below.

Environmental Authority	Mmamabula-Delta
National Department of Environment Affairs & Tourism (DEAT) = Lead authority	12/12/20/889
Limpopo Department of Economic Development, Environment and Tourism (L-DEDET)	16/1/7/1L – W3

The construction of facilities or infrastructure including associated structures or infrastructure for the transmission and distribution of above ground electricity with a capacity of 120 kilovolts or more is an activity identified in terms of section 24(2)(a) and (d) of the National Environmental Management Act (Act

No. 107 of 1998) which may not commence without environmental authorisation from the competent authority and in respect of which the potential impact of activities must follow procedures as described in regulations 27 to 36 of the Environmental Impact Assessment Regulations, 2006 promulgated in terms of section 24(5) of the Act.

1.2. OVERVIEW OF THE MATIMBA AND MMAMABULA INTEGRATION PROJECTS

This project forms part of the larger project to transmit the power received from Matimba B PS to Eskom's Transmission Network. Other Eskom Transmission Projects in the area include 4 x 400kV transmission power lines from Mmamabula PS in Botswana to Delta SS, 6 x 765kV transmission power lines from Delta SS to Epsilon SS near Potchefstroom and the construction of the Epsilon Substation.

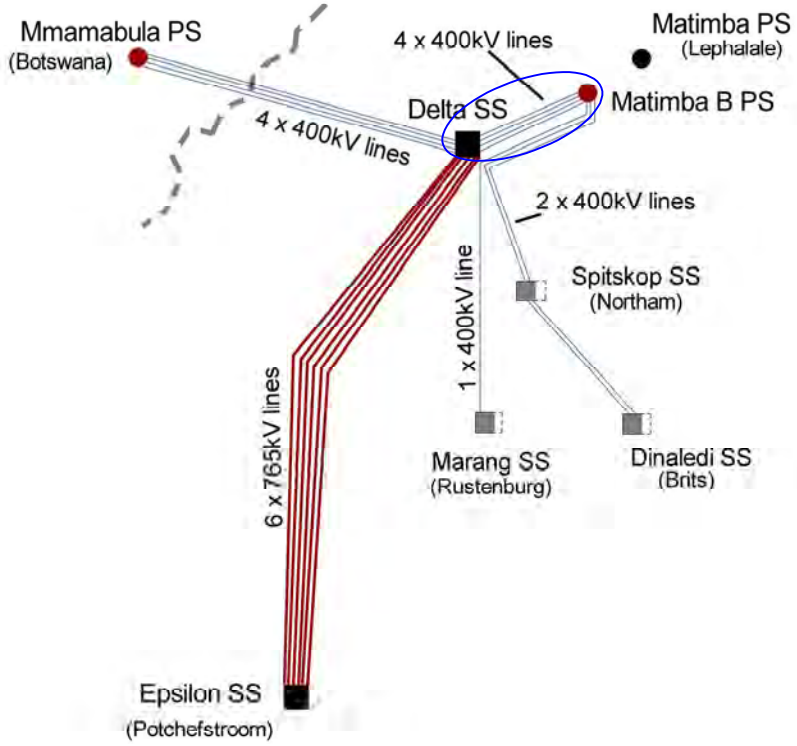


Figure 1.

Studies for other lines close to the study area are also being conducted. These include 2 x 400kV transmission power lines from Matimba B Power Station to Dinaledi SS (Brits), via Spitskop SS (near Northam) and 1 x 400kV transmission power line from Matimba B to Marang SS (near Rustenburg). Each of these substations will need to be expanded to support the additional lines.

1.3. EIA PROGRAMME

The EIA process followed is in accordance with the EIA Regulations as promulgated in terms of the National Environment Management Act (No. 107 of 1998).

The intended study programme is set out below. These dates are dependent on the outcomes of both the study and public consultation processes. Therefore, the dates indicated below should only be considered as a guideline.

Activity	Target date	Actual completion
Submission of Application to DEAT & Limpopo	21 December 2006	21 December 2006
Approval of Plan of Study for Scoping	End January2007	19 January 2007
Submission of Scoping Report for public comment	End April 2007	
Submission of Scoping Report & PoS for EIA to DEAT & Provinces	End May 2007	
Authority approval of Scoping Report & PoS EIA	late June 2007	
Specialist studies (EIA)	May-June 2007	
Submission of EIR for public comment	End June 2007	
Submission of EIR to DEAT & Provinces	End July 2007	
Record of Decision	Early October 2007	

The time line given above aims to bring the submission of the Environmental Impact Report (EIR) for public comment at the same time as the EIR for the Mmamabula – Delta lines.

2. APPROACH TO THE STUDY

As indicated above, it is anticipated that a full EIA process (and not just a Basic Assessment) will be applicable for this project. This includes:

- The Scoping Phase – targeted for completion by end May 2007, and
- the EIA Phase – targeted for completion by end July 2007.

These timeframes are more in line with the study timeframes for the Mmamabula-Delta EIA study. The full EIA process is being carried out in accordance with Regulations 27 to 36 compiled in terms of section 24(5) read with section 44 of the National Environment Management Act No.107 of 1998.

The timelines and deliverables on this project will impact on the overall project timelines. The achievement of these deadlines will require that the EIA consultant adheres to deadlines, and also that the authorities assist in minimising document review timeframes.

The project lies within the Limpopo province. The National Department of Environment and Tourism (DEAT) is understood to be the decision-making authority on all transmission projects above 132kV. However, the EIA consultant undertakes to copy all correspondence to the office of the provincial authorities and will invite the case officer to all meetings, site visits, etc. that may involve authority participation.

The following is proposed for the streamlining of the project:

- All final document submitted to the authorities will be made available to the public. Registered stakeholders will be given notice of submission dates. This is to ensure improved transparency and a more defendable Public Participation Process (PPP).

- To assist in the document review process by the authorities, the EIA consultant will offer a PowerPoint presentation of the contents of the document upon submission. It is not known whether the authorities will require the presentation and this will be discussed and decided on. Should any such presentation be made, a copy of the presentation will be made available to registered stakeholders.

2.1. OBJECTIVES OF THE SCOPING STUDY

The scoping phase was utilised for researching the study area, identifying preliminary power line corridors and substation sites, and identifying those issues relevant to the study. The SR is intended to set out the issues to be taken forward into the technical EIA phase. In essence the scoping phase is used to ‘scope’ potential corridors for the power transmission lines and potential substation sites.

The scoping phase has focussed on public consultation and site inspections to consider the study area, proposed project design and alternatives. The activities of the PPP are set out in Section 5.

The objectives of this detailed scoping study are to:

- identify relevant interested and affected parties (IA&Ps) and/or stakeholders;
- inform the above parties as well as the general public about the proposed project;
- provide an opportunity to these parties to raise issues and concerns pertaining to the proposed development and to provide feedback and help inform the project and process design;
- identify potential fatal flaws (impacts that cannot be mitigated to environmentally acceptable levels and render the project environmentally unfeasible);

- consider all available specialist and technical data in order to determine areas of environmental sensitivity in the study area and “scope out” such areas in order to focus the process towards a proposed best route with possible alternatives on which the technical EIA phase will have to be focussed;
- set out the extent of the required detailed studies in the EIA phase; and
- provide sufficient information to the authorities so as to help inform their decision-making.

It is relevant to state here that this Scoping Study has drawn on the studies and consultation that has taken place during the Scoping phase of the Mmamabula-Delta EIA.

3. DEVELOPMENT PROPOSAL

This section gives an explanation of the applicable project aspects for this project including some of the key technical details that will be required for the public to understand what the project entails and to assist the relevant authorities in make an informed decision on whether the project should be approved.

3.1. PROJECT LOCATION AND STUDY AREA

The study area is located within the wider area as shown below in Figure 3.1. Please also refer to **Study Area Map** in Volume III of the Mmamabula-Delta Scoping Report (January 2007) for an indication of the project location and extent.

Delta SS will be located near the planned new Matimba B Power Station, now called Medupi Power Station, near Lephalale and will be linked to it by four 400kV Transmission power lines.

Figure 3.1

3.2. PHYSICAL ELEMENTS OF THE PROJECT

Delta Substation.

The Delta substation, which will be a 400/765kV substation, will assist in:

- Minimising Mmamabula transmission integration costs,
- Minimising Matimba B transmission integration costs,
- Minimising the number of transmission lines and servitudes.
- Supporting a power corridor that is optimised to provide a stable supply to meet demands in the western portion of the Central Grid and the Cape Grids.

The footprint of the substation is expected to be smaller than 1km x 1km (=100ha). This area is therefore being used as the maximum likely footprint in this EIA. Much of the internal infrastructure will be less than 20m high, comprising the lattice steel structures, cabling and transformers typical of a Transmission substation. A communications mast will also be installed within the yard area. The height is dependent on topography and reception, but is typically around 45m high. Examples of large substations are given in the photos below.

Figure 3.2 Example of Venus Substation (400kV), Estcourt, Kwa-Zulu Natal

Figure 3.3 Pegasus Substation (400kV), Dundee, Kwa-Zulu Natal (note communication mast)

Figure 3.4. Zeus Substation (400kV), Standerton, Mpumalanga (showing communication mast)

Figure 3.5. Perseus Substation (400kV), Dealesville, Free State

Delta SS will connect the lines shown in the following schematic:

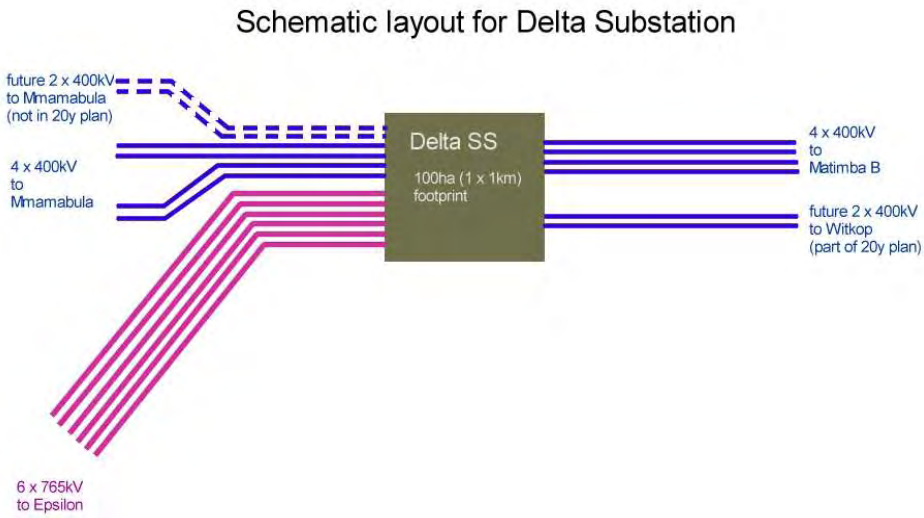


Figure 3.6

Matimba B Substation

Matimba B Substation will be located within the site of the power station on the farm Naauw Ontkomen 509LQ, and will include both 132kV and 400kV supply.

The size and layout of the Matimba B substation is expected to be similar to the layout at the existing Matimba Power Station (see Figure 3.7). The substation will merely be an extension of the new power station infrastructure.

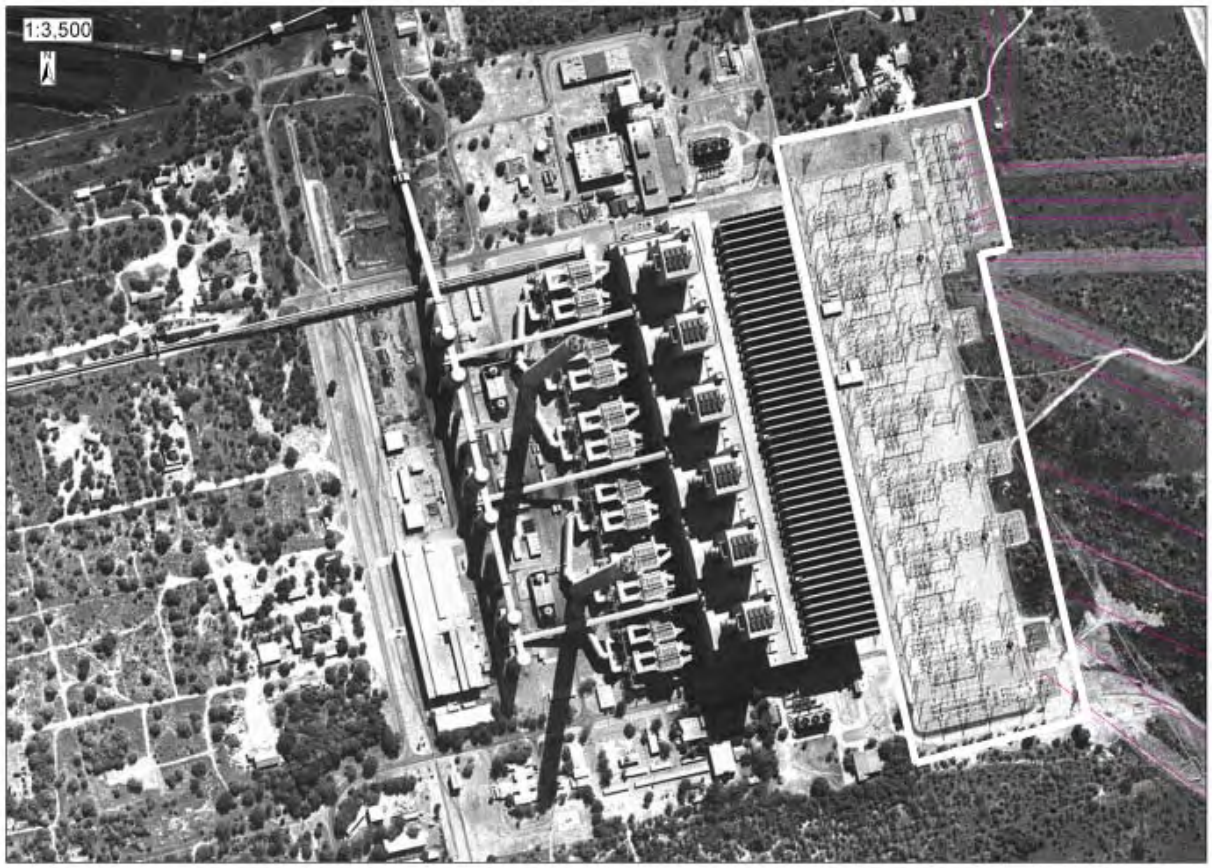


Figure 3.7. Aerial view of (existing) Matimba PS showing substation yard on the right.

The 132kV supply will be to the local municipal network and will be designed and operated by the regional office of Eskom Distribution. These lines are not addressed in this EIA.

The 400kV lines will feed into Eskom Transmission's National Grid as follows:

Lines	Direction	Comment
1 x 400kV line to Marang SS (Rustenburg)	south	Subject to a separate EIA study (ongoing)
2 x 400kV lines to Dinaledi SS (Brits), via Spitskop SS (Northam)	south	Subject to a separate EIA study (ongoing)
4 x 400kV lines to Delta SS	tbc	Included in this study

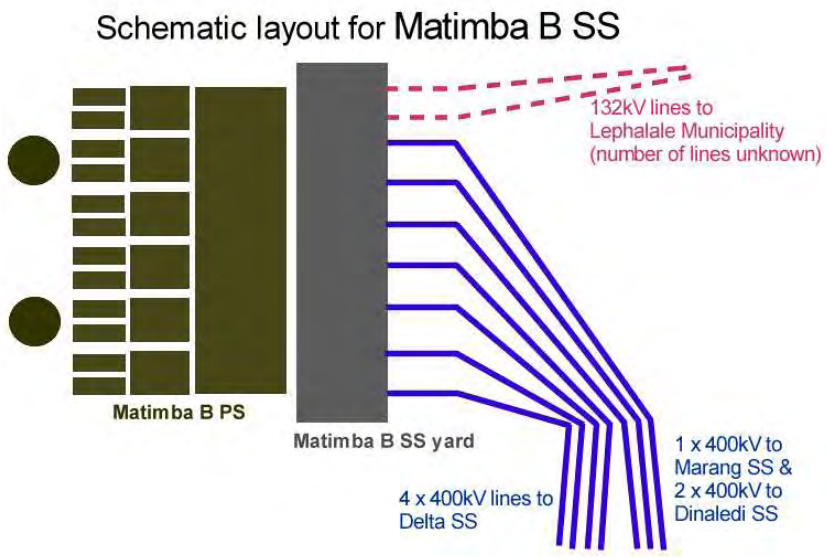


Figure 3.8

Matimba B – Delta 4 x 400kV lines

All the lines shown above are subject to separate EIA studies with the exception of the 4 x 400kV lines to Matimba B, which are addressed here. These lines from Matimba B PS will ensure that the Transmission system meets the following:

- Reliability in the event of the loss of one or two of the 400kV lines through incidents such as bush fires.
- Transient stability of the Mmamabula power station.
- Support and sustain growth in all parts of the country by relieving generation in constrained parts of the transmission system.
- Minimize chances of common mode failure.

During the scoping phase, landowners requested that upgrading the lines to 765kV should be considered to prevent additional lines being required in the future. This was put to Eskom who confirmed that the same number of lines would still be required irrespective of line capacity. The four lines are needed to meet the requirements of reliability and stability described above.

Power lines connecting power stations to the National Grid have high strategic significance. Network instability caused by the failure of these lines could cause uncontrolled load shedding anywhere in the National Grid with substantial economic consequences at national level. These lines are therefore subjected to higher design standards than the rest of the network. Further information on this may be gained from Appendix I-3 of the Mmamabula-Delta Scoping Report[1]. The outcome of this design requirement is that Eskom requires four power lines to provide the necessary level of reliability, irrespective of whether these are 400kV or 765kV. Hence the focus of this study remains to be four 400kV lines.

Eskom proposes to use the Cross-rope tower design for these lines. Examples of these are shown in Figure 3.9 and 3.10 below. This is different from the Guyed-V structure currently used in the study area and depicted in Figure 3.14.

[1] Mmamabula-Delta 4 x 400kV Transmission Power Line Scoping Report, Volume I, Appendix I-3. Published for public comment January 2007. Available at www.eskom.co.za/eia or on request from Margen (see cover for details).

The more traditional strain towers will still be used, typically where difficult terrain is encountered or line deviations of more than 3° are required.

The following are examples of the expected towers/pylons to be used:

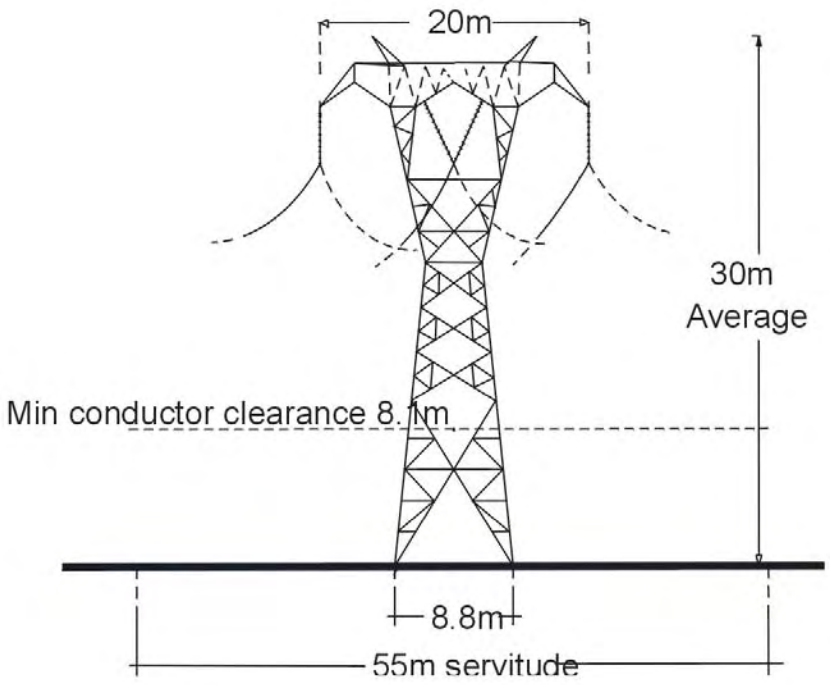


FIGURE 3.9 – STRAIN TOWER: 400KV LINE

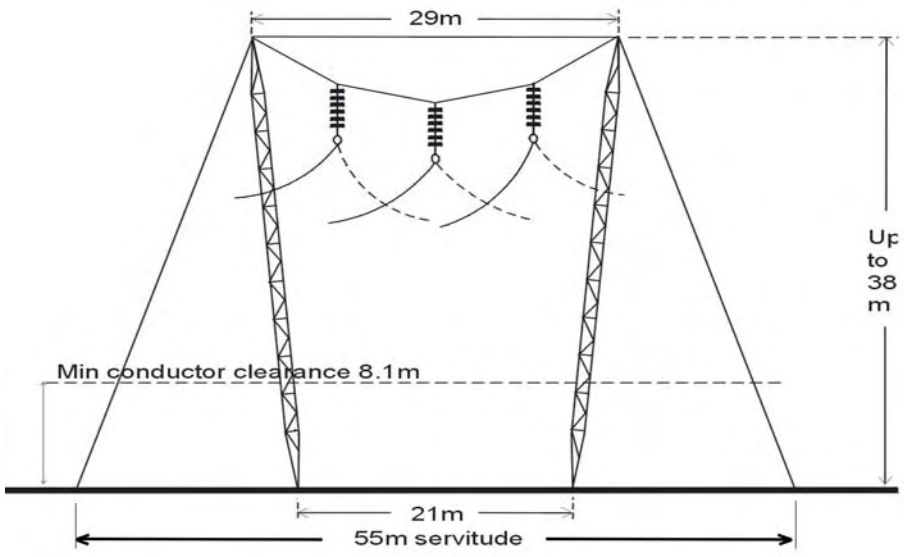


FIGURE 3.10 – CROSS-ROPE SUSPENSION TOWER: 400KV LINE (WIDE MAST SPACING)

FIGURE 3.12 – 400KV TRANSMISSION POWER LINES - PHOTO OF STRAIN TOWER

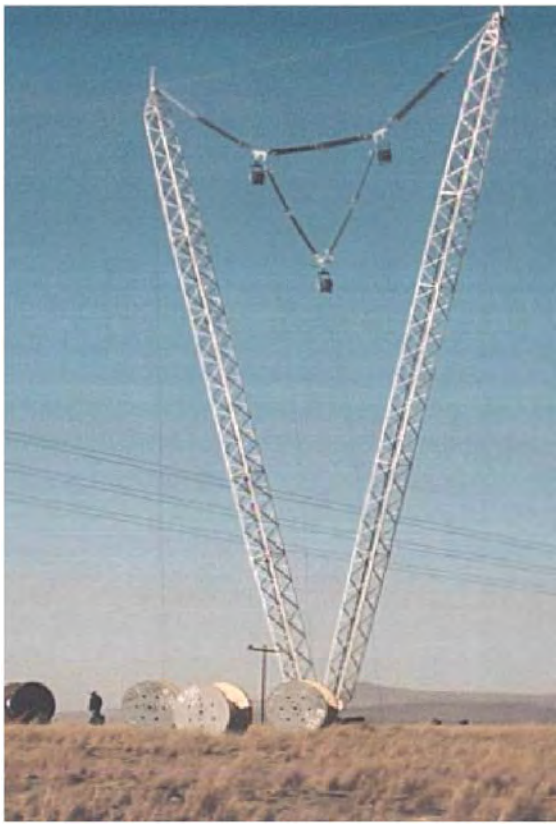


FIGURE 3.13 – 400KV TRANSMISSION POWER LINE – PHOTO OF CROSS-ROPE SUSPENSION TOWER (NARROW MAST SPACING)

FIGURE 3.14 – 400KV TRANSMISSION POWER LINE – GUYED – V STRUCTURES NEAR MATIMBA POWER STATION

The proposed 400kV cross-rope pylons are normally in the order of 38m in height with a minimum conductor clearance of 8.1m. The conductor height is set to minimise impacts on, or by, human activities. Furthermore, in conjunction with the servitude width, the conductor height minimises any potential effect of electromagnetic radiation on humans and animals.

The standard servitude size for 400kV transmission power lines is 55m and towers are placed between 350m and 500m apart over the power line length depending on terrain and route angles. Hence if two 400kV lines run parallel to the other, the minimum servitude size will be 110m. This would be the case on this project where Eskom is proposing that the lines run in 'double servitudes' and that these are then separated by a minimum of 2km.

The specification for the spacing of the power lines between Matimba B (Medupi) PS and Delta SS has been provided by Eskom as follows:

"(The) Spacing of 400kV lines between Medupi and Delta should be such that it is permissible to trip multiple lines without losing the power station. Spacing and vegetation clearance should be as in the existing Matimba lines, if one line falls it should not touch the other one adjacent to it electrically or physically."

Specification for the clearing of the vegetation in the servitude still needs more detailed clarification, however the photographs below (Figures 3.15 & 3.16) will give some indication as to what is intended.

Eskom Transmission obtains a right of way over the servitude area that allows Eskom to utilise the servitude land for purposes of electricity transmission. As part of this right of way, Eskom obtains right of

access for normal maintenance and emergency, though these access arrangements are to be within set guidelines[2].

The right of way also places certain landuse restrictions within the servitude. The following are examples of restrictions:

- No building of houses, sheds or similar constructions that could affect the operation of the power line and pylons.
- No blocking of access to the servitude area that would deny Eskom maintenance operators access to and/or servicing the servitude area.
- The planting of trees and crops that could threaten the operation of the line (e.g. forestry plantations, sugar cane (fire risk)).
- No blasting or excavating within the servitude area without prior approval from Eskom.

However, most agricultural practices are usually not affected by the power lines. These include:

- Grazing and dry-land cultivation activities within the servitude area.
- Most forms of irrigation are possible, even centre pivots may be accommodated, though full operation my not be possible.
- Vegetation clearing and animal movement within the servitude area.
- Placing of topsoil berms not exceeding certain dimensions under the power lines or within the servitude area.

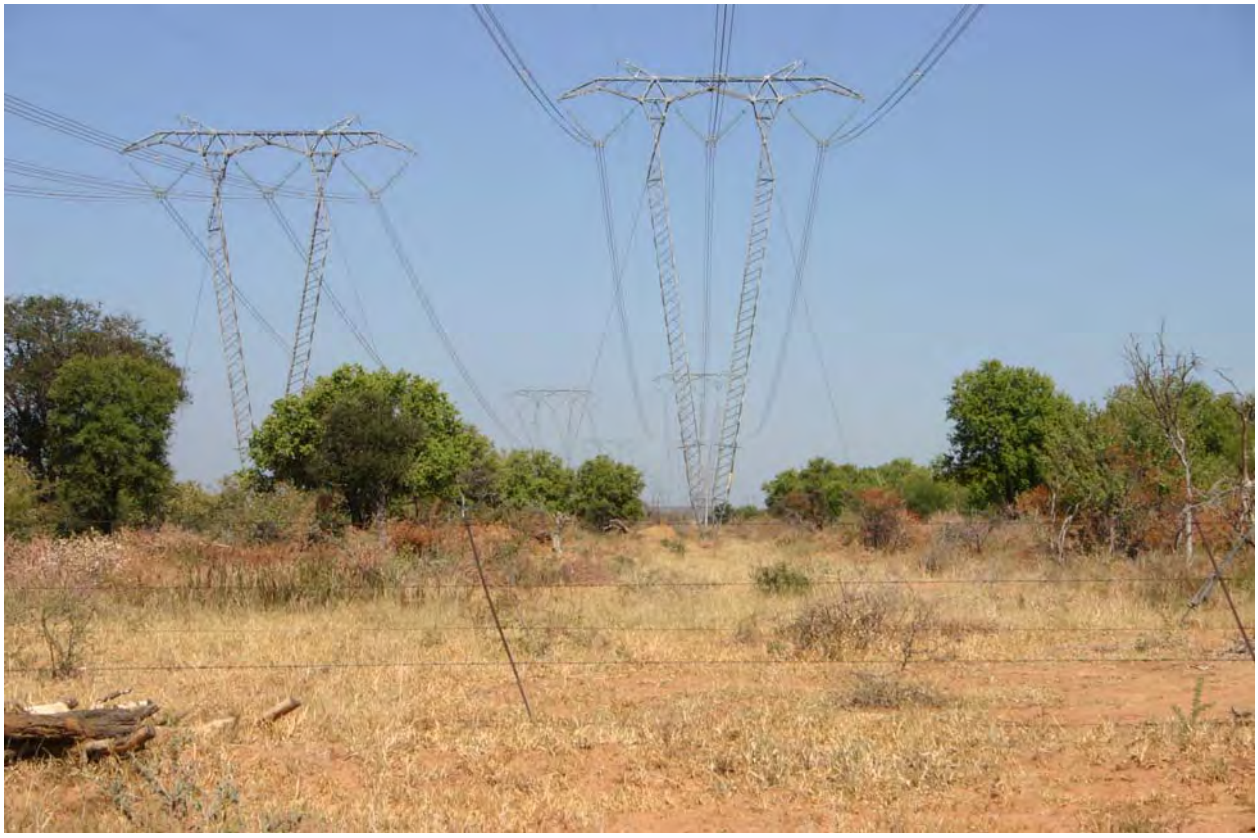


Figure 3.15 Example of servitude condition on the existing 400kV lines south of Matimba PS

[2] Mmamabula-Delta 4 x 400kV Transmission Power Line Scoping Report, Volume I, Appendix I-2. Published for public comment January 2007. Available at www.eskom.co.za/eia or on request from Margen (see cover for details).

Figure 3.16 Example of servitude condition on the existing 400kV lines south of Matimba PS

3.3. PROJECT MOTIVATION AND BACKGROUND

The following is a description of the motivation of the project including the overall strategy to meet the power demands of the country's growing economy. The predicted shortfall in generation capacity in South Africa is well publicised and the Department of Minerals and Energy (DME), along with Eskom and the private sector, are working toward generating an average additional 1200 to 1500MW per annum for the next 15 to 20 year to match the anticipated growth in electricity demand. An outline of the 20-year plan for new generation has been prepared as part of this study[3].

Coal-fired generation remains an important element of South Africa's generation capacity and the coal reserves in the Waterberg Coal Fields form a substantial part of the 20-year plan. (See Eskom's General Need and Justification[4]) The development of Matimba B (Medupi) PS to up to 2100MW is the first phase (called Project Alpha) of the current plan for the Waterberg Coalfields. The second phase, called Project Charlie, will see Matimba B (Medupi) expanded by an additional 2100MW.

The Mmamabula Coal Bed is an extension of the Waterberg Coal Field into Botswana. A new power station called Mmamabula will be built by CIC Energy near the town of Mahalapye in Botswana (see Figure 3.17 below). It will sell up to 90% of its generating capacity to South Africa. Mmamabula will also be developed in two phases; the first will produce 2400MW from 2011, upgrading to 5000MW at a later date.

[3] Mmamabula-Delta 4 x 400kV Transmission Power Line Scoping Report, Volume I, Appendix I-1. Published for public comment January 2007. Available at www.eskom.co.za/eia or on request from Margen (see cover for details).
[4] Mmamabula-Delta 4 x 400kV Transmission Power Line Scoping Report, Volume I, Appendix I-13. Published for public comment January 2007. Available at www.eskom.co.za/eia or on request from Margen (see cover for details).

The network set out in Eskom's 20-year plan (see Figure 1) has been designed to optimise the transmission of electricity between new power stations in the Waterberg coal fields to electricity load growth centres to the south. These load growth centres include the areas around Rustenburg and Brits, as well as those regions to the south, particularly the Northern Cape, Western Cape and Eastern Cape growth areas. These growth areas are supported by a 765kV 'backbone' network that is currently being extended south through the Free State.

To connect to this 765kV 'backbone' network, Eskom has designed the network expansion in Figure 1 in which Delta SS is one of the central features. This will receive electricity from both new power stations and deliver it south to the National Grid via 6 x 765kV lines to a new substation called Epsilon, located near Potchefstroom and Klerksdorp.

The Transmission integration studies indicate that the optimal solution that will minimise the overall number of power lines from Mmamabula and Matimba B (Medupi) power stations is the coupling of the two power stations at Delta SS. This was designed to be located within 20km of the Matimba B PS. The Delta SS will be linked to both Matimba B and Mmamabula power stations by 4 x 400kV power lines, and will ensure that:

- Mmamabula and Matimba B (Medupi) achieve angular stability (they will be in synchronicity that will result in a system that has the same frequency range even under disturbance) with an optimum number of lines,
- Mmamabula Transmission integration costs are kept to a minimum,
- Matimba B Transmission integration costs are kept to a minimum,
- The number of Transmission lines and servitudes through farms is minimised.
- Delta SS will support the development of a power corridor is established to optimally support growing electricity demand in the western portion of the Central Grid and the Cape Grids.

Figure 3.17 shown below represents Eskom's plan to meet electricity demand using power from the Lephalale area.

3.4. PROJECT PROGRAMME

It is essential for Eskom Transmission to establish the necessary transmission links by the time the Mmamabula power station is operational and this is planned to occur by 2010. The EIA process is envisaged to produce a result in the second half of 2007. This means that servitude negotiations have to be finalised early in 2008. The construction of these lines and substation may take up to two years therefore they could be completed towards early in 2010.

As indicated above, the project is of strategic importance to the country and Eskom is concerned that any delays in the project programme could have serious consequences in the planned delivery of electricity.

3.5. PROJECT ALTERNATIVES

Alternative development options are considered at two levels in this report. Firstly, presented here are the potential alternatives that may extend beyond the study area set for this project. Secondly, alternatives within the study area are discussed in Section 4 of this report.

3.5.1. 'Do Nothing' Option

The new Mmamabula Power Station will send between 70% and 90% of the generated electricity to South Africa. However, even without this contribution it is understood Eskom will still require Delta SS, the 4 x 400kV lines between Matimba B (Medupi) and Delta, and the 6 x 765kV lines to Epsilon to transmit the full capacity of Matimba B PS (ie Projects Alpha and Charlie) to load centres to the south. Therefore a 'Do Nothing' alternative will prevent the full implementation of Matimba B (Medupi) PS.

3.5.2. Network alternatives

As set out in Section 3.3 the network has been optimised to minimise the number of new lines and substations, but still provide the necessary stability and reliability needed to integrate the new power stations into the South African National Grid. It is understood that should independent networks be established for Mmamabula PS and Matimba B PS up to 15 x 400kV power lines would be required to integrate them with the SA National Grid at the necessary level of reliability of supply. It is also understood that, due to the distances involved, additional substations would be needed for the 400kV lines.

3.5.3. Upgrading lines to fewer 765kV lines

There are four 400kV power lines proposed for the link between the Matimba B PS and Delta Substation.

It has been proposed by the EIA study team that increasing the lines to 765kV would reduce the number of power lines required, therefore potentially reducing the environmental impact. However, Eskom has stated that to minimise the effects of faults on the lines and the effect of line failure on the stability of the network, the same number of power lines would be required irrespective of the capacity of the lines. Therefore, increasing the lines from 400kV to 765kV would not result in any reduction in the number of lines proposed between Matimba B PS and Delta SS.

3.5.4. Double circuit lines (two lines on one pylon)

In certain circumstances Eskom may construct double circuit lines. This has been done on 400kV lines and the smaller Distribution lines (i.e. 132kV and smaller), but is not normally considered for larger lines though there are potential environmental benefits in using a single pylon to carry two lines.

However, failure of the Matimba B-Delta 400kV lines would have drastic consequences on the stability of the national network. It is clear that Eskom would not increase the risk of failure by placing two lines on one tower structure. Hence this option has not been considered any further.

3.5.5. Route alternatives and Delta SS location within the study area

A separate discussion is presented in Section 4 on route alternatives within the study area.

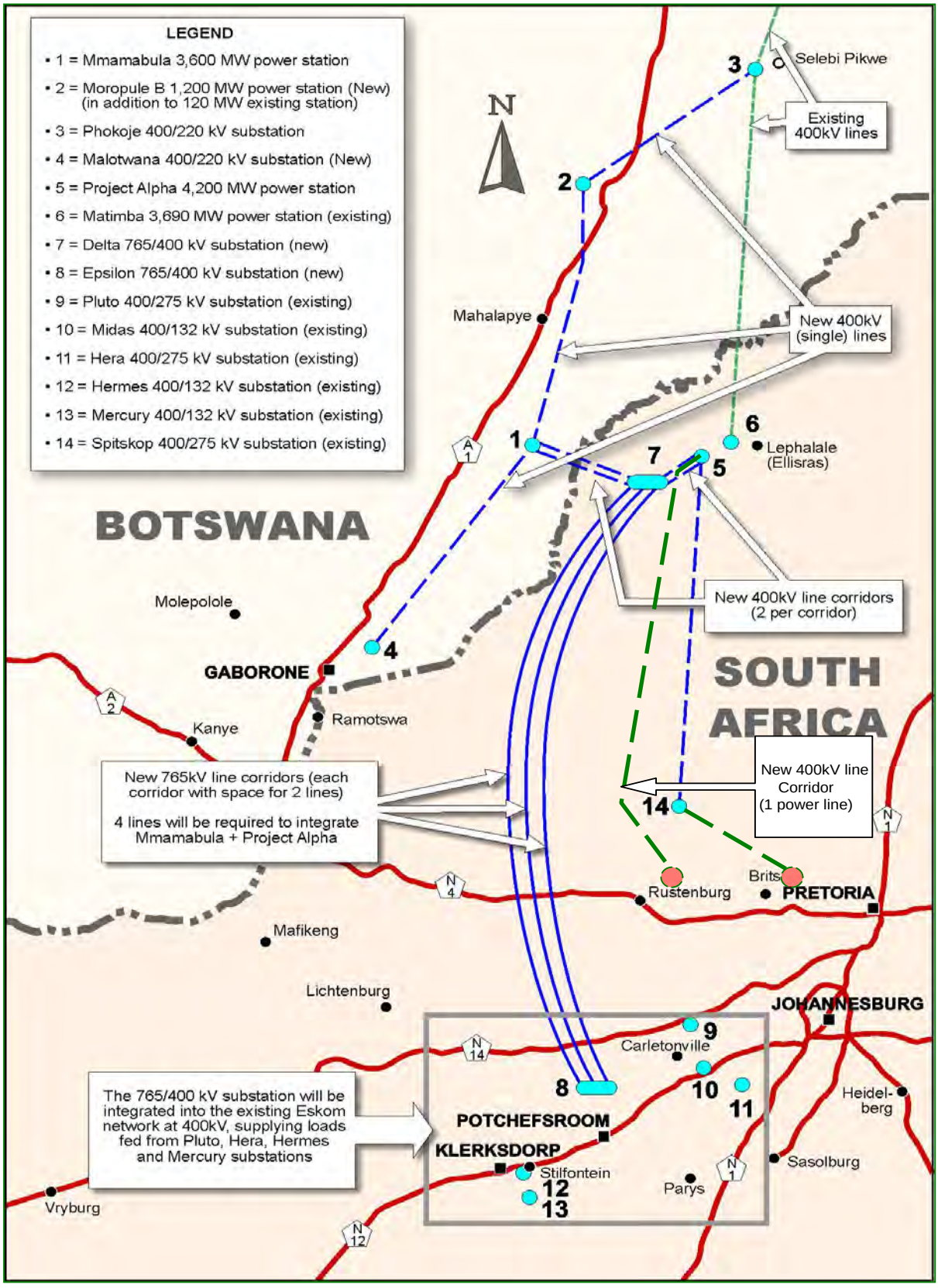


FIGURE 3.17 BASIC LAYOUT OF MMAMABULA TRANSMISSION INTEGRATION PLANNING (*COURTESY OF CIC ENERGY*)

4. ALTERNATIVES TO BE ADDRESSED IN THE EIA PHASE

Much of the fieldwork was undertaken during the Mmamabula-Delta Scoping study has helped provide a basis for the identification of possible sites for Delta SS and power line corridors. Input gained from the public consultation process has supplemented this assessment, and has been used in the compilation of this assessment for Delta SS and the 4 x 400kV lines between Matimba B PS and Delta SS.

At the start of the project, no specific power line routes or corridors were provided and the specialists assessed the general study area in order to arrive at areas of obvious high environmental sensitivity that should be avoided by the proposed power line corridors. The main factors considered in identifying substation site and power line corridor alternatives include:

- Current land use as determined by aerial flyovers and aerial photographs, as well as input from stakeholders (both mining companies and landowners). Differentiation between grazing land and game farming/lodge facilities has not been confirmed in all cases thus far.
- The presence of the Eenzaamheid fault line as an indicator of the southern extent of coal resources and runs through the study area from east to west.
- Borehole records for coal prospecting were also used where relevant, though the data received from the Council for Geosciences has since been called into question.
- Information contained in the specialist reports presented in the Mmamabula-Delta Scoping Report[5].
- Information contained in the Addendum to the Scoping Report for the Mmamabula-Delta EIA[6].
- The 20-year strategic plan for the Eskom Transmission network expansion in this area[7]
- Outcome of public meetings held thus far, but particularly those of the 10th February, 13th April and 14th April 2007.

4.1. DELTA SUBSTATION LOCATION

The role of Delta SS is set out in Section 3.2. The substation will connect the following lines:

Lines	Direction	Comment
4 x 400kV lines from Matimba B (Medupi) PS	tbc	
4 x 400kV lines to Mmamabula PS	west	The potential for two additional 400kV lines in future is acknowledged, but these are not part of the current 20year plan
6 x 765kV lines going to Epsilon Substation	south	Not included in this study, but EIA started February 2007
2 x 400kV lines to Witkop Substation	east	Not included in this study

[5] Mmamabula-Delta 4 x 400kV Transmission Power Line Scoping Report, Volumes I to III. Published for public comment January 2007. Available at www.eskom.co.za/eia or on request from Margen (see cover for details).
[6] Mmamabula-Delta 4 x 400kV Transmission Power Line Addendum to the Scoping Report. Published for public comment March 2007. Available at www.eskom.co.za/eia or on request from Margen (see cover for details).
[7] Mmamabula-Delta 4 x 400kV Transmission Power Line Scoping Report, Volume I, Appendix I-1. Published for public comment January 2007. Available at www.eskom.co.za/eia or on request from Margen (see cover for details).

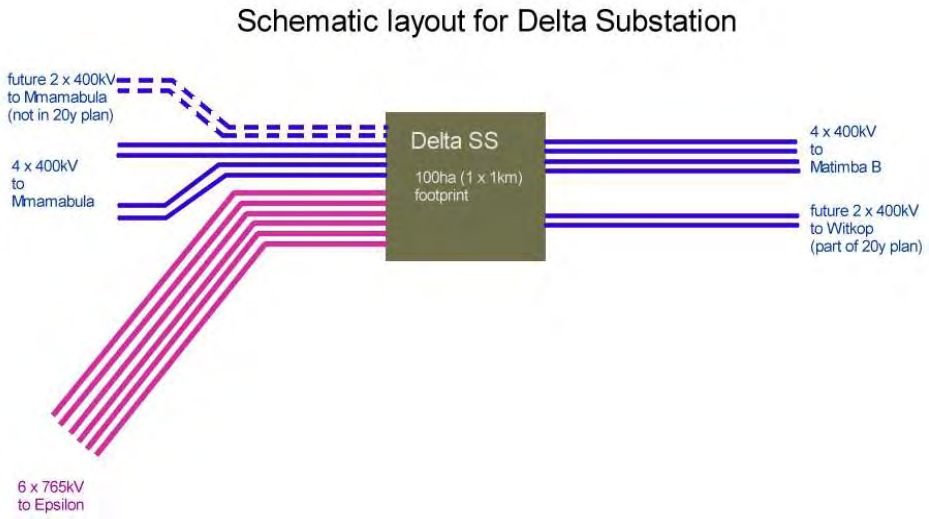


Figure 3.6

Initial investigations identified a number of possible substation locations as is shown in Figure 5.1. The location of the substation has provoked a lot of discussion during the public participation that has been undertaken to date. (See the Comment & Response Document, Appendix 6).

The guideline provided by Eskom for the location of Delta SS was that it needed to be approximately 20km west/south-west of Matimba B. However, after initial consultation with stakeholders in Lephalale it was agreed by Eskom that Delta SS could be located nearer to Matimba B PS.

DEAT required that landowner consent needed to be obtained before the EIA could begin. Essentially this meant that the landowner gives consent for an EIA to be undertaken on his/her property, but not necessarily consent for Eskom to use the site for the substation. This presents some problems in this early planning stage as there is little information to suggest one property is more suitable for the substation than the next, and landowners are reluctant to give consent as there is an inherent suggestion that they are giving approval for the substation as well. However, a number of sites were provisionally identified and Eskom sought to obtain the necessary consent, but stopped after more and more sites were being identified by the EIA consultant and the majority of landowners were reluctant to sign the consent form. Furthermore these approaches lead to suspicion within the farming community that the substation site was predetermined and that the EIA process is a façade.

The location of Delta SS needs to consider both the size of the substation, the number of lines connecting to it and their direction. Within the 20-year plan a total of 16 power lines will connect to Delta SS. To accommodate these lines a substation area of almost 100ha will be needed.

From the schematic above (Figure 3.6), the largest size and number of lines (6 x 765kV) will run southwards. The others will run east and west. Therefore the location of Delta SS north of Matimba B PS will need to accommodate these lines. Furthermore, unless the substation is located some distance from Matimba B, any location north will place the substation within mining land or over coal reserves.

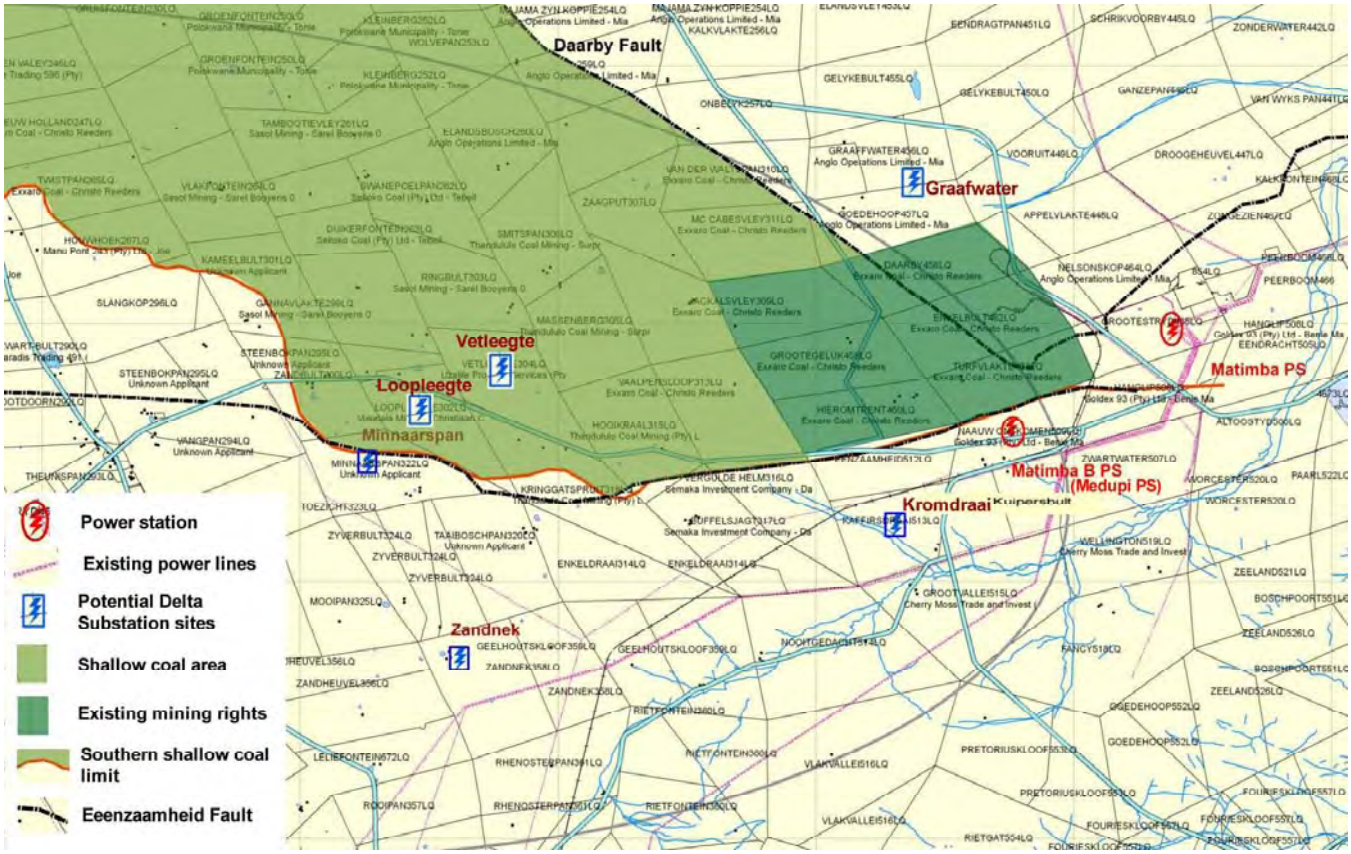


Figure 5.1: Potential Substation Sites

In general, from initial Scoping level investigations, the environmental sensitivity (including landuse and eco-tourism) of the areas to the north of the Eenzaamheid Fault line is seen to be similar to those south of the line. One of the main distinguishing aspects of the environment is the current and anticipated future mining of coal. Therefore, looking at current coal mining activities and knowledge of available coal reserves, Figure 5.1 provides some guidance on potential sites for Delta SS.

Motivation for each of the sites in Figure 5.1 is given below:

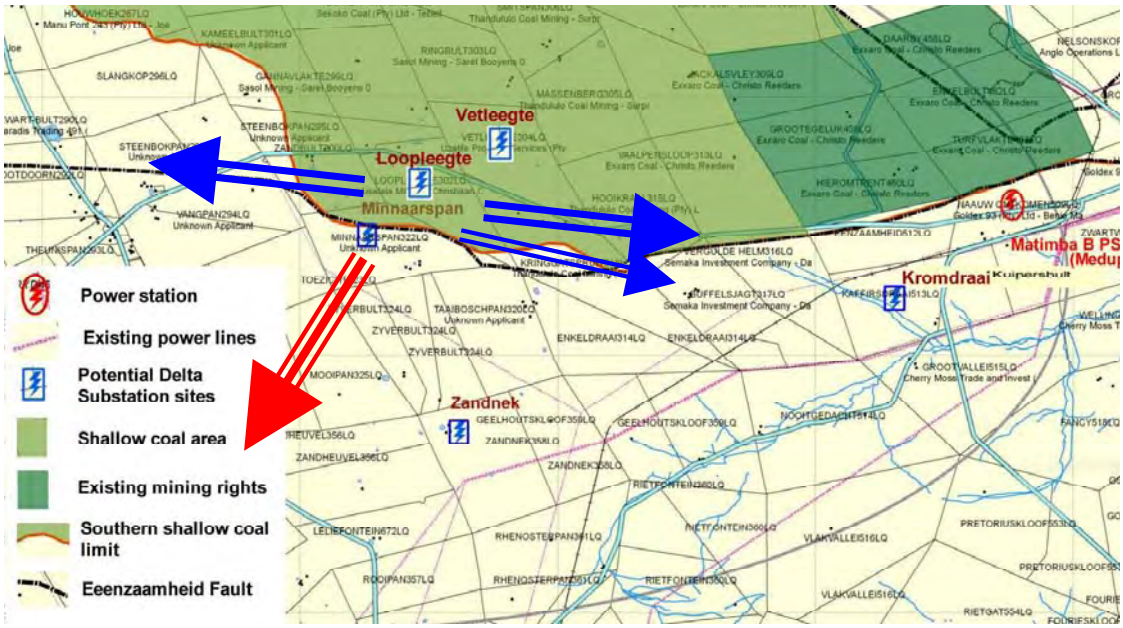
<u>Farms Loopleegte, Vetleegte and Minnaarspan</u>
Loopleegte and Vetleegte were initially proposed by Eskom as being within the necessary distance from Matimba B (Medupi) PS, they are more or less on the straight line to Mmamabula PS and they are near the main road to Steenbokpan (and therefore have good access). Consent to carry out an EIA on each property were obtained from the landowners for both farms. However, these sites were placed in question once it became clear they were north of the Eenzaamheid Fault line and therefore over shallow coal reserves.

As a result the Farm Minnaarspan was identified. It is south of the Eenzaamheid Fault and also away from the Steenbokpan road that had by then been identified as a tourist route (the Marula Route) during the early stages of the Mmamabula-Delta Scoping studies. However, consent to undertake an EIA on Minnaarspan has not been obtained from the landowners as yet.

Further progress in the Scoping studies for the Mmamabula-Delta lines; the public challenged the presumption of keeping off the coalfields. Exploration borehole data was presented that suggested routes through this area might be feasible. This data has since been called into question, but has raised the

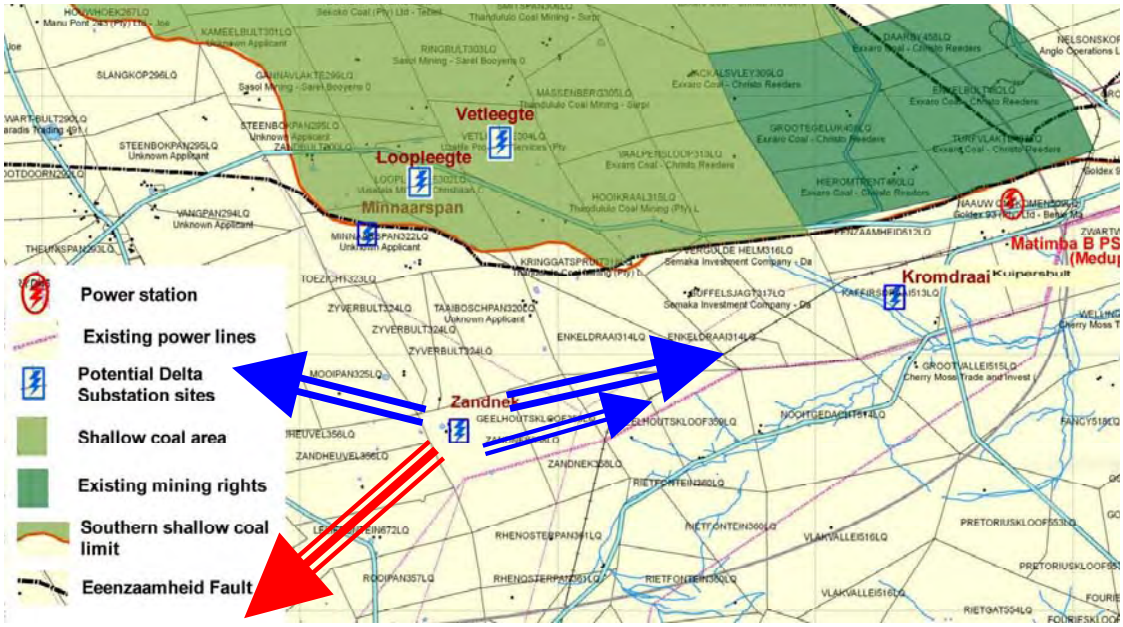
possibility of a services servitude (or a 'utility corridor') through the coal fields that will contain all the infrastructure that the mines will need to operate (roads, rail lines, pipe lines, etc.) and this could include the power lines. While this option is being explored in the EIA phase of the Mmamabula-Delta power line EIA, all three of these farms will be retained as potential sites for the Delta Substation.

The configuration of power lines around a substation anywhere in the area of these farms is indicated below (thick blue arrows are 4 x 400kV, thin blue arrow is 2 x 400kV and red arrow is 6 x 765kV).



Farm Zandnek

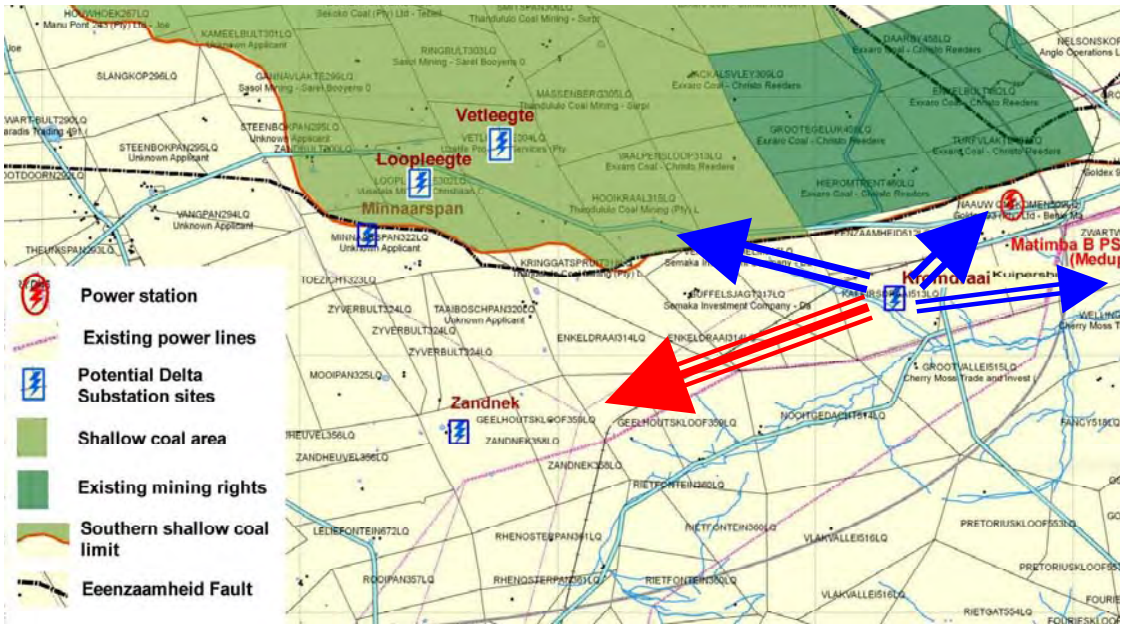
The existing 400kv lines from Matimba PS, running south-west and then south, provides another corridor for the lines running west and south of Matimba B (Medupi) PS. A substation anywhere along these lines may be considered, but the bend point on the Farm Zandnek is a more convenient point from where the new 400kV lines to Mmamabula can radiate west and the 765kV lines to Epsilon can radiate south.



This site was identified as an option for Delta SS early in the Scoping study. As with the other sites, Eskom sought to gain consent to carry out an EIA from the landowner. The landowner initially rejected this, but he then agreed provided that Eskom carried out a valuation of the property. At that stage it was confirmed that Eskom would only take the situation further once the EIA for Delta SS has been completed and that Zandnek is identified as the preferred site.

Farm Kromdraai

At a public meeting in November 2006, Eskom confirmed to the public present that Eskom would consider a site for the substation close to Matimba B (Medupi) PS. Initially the Farm Eenzaamheid was considered, but it then became known that Eskom Generation was in the process of buying the Farm Kromdraai for supporting services for the new power station (Medupi) which will be placed nearby on the Farm Naauw Ontkomen.

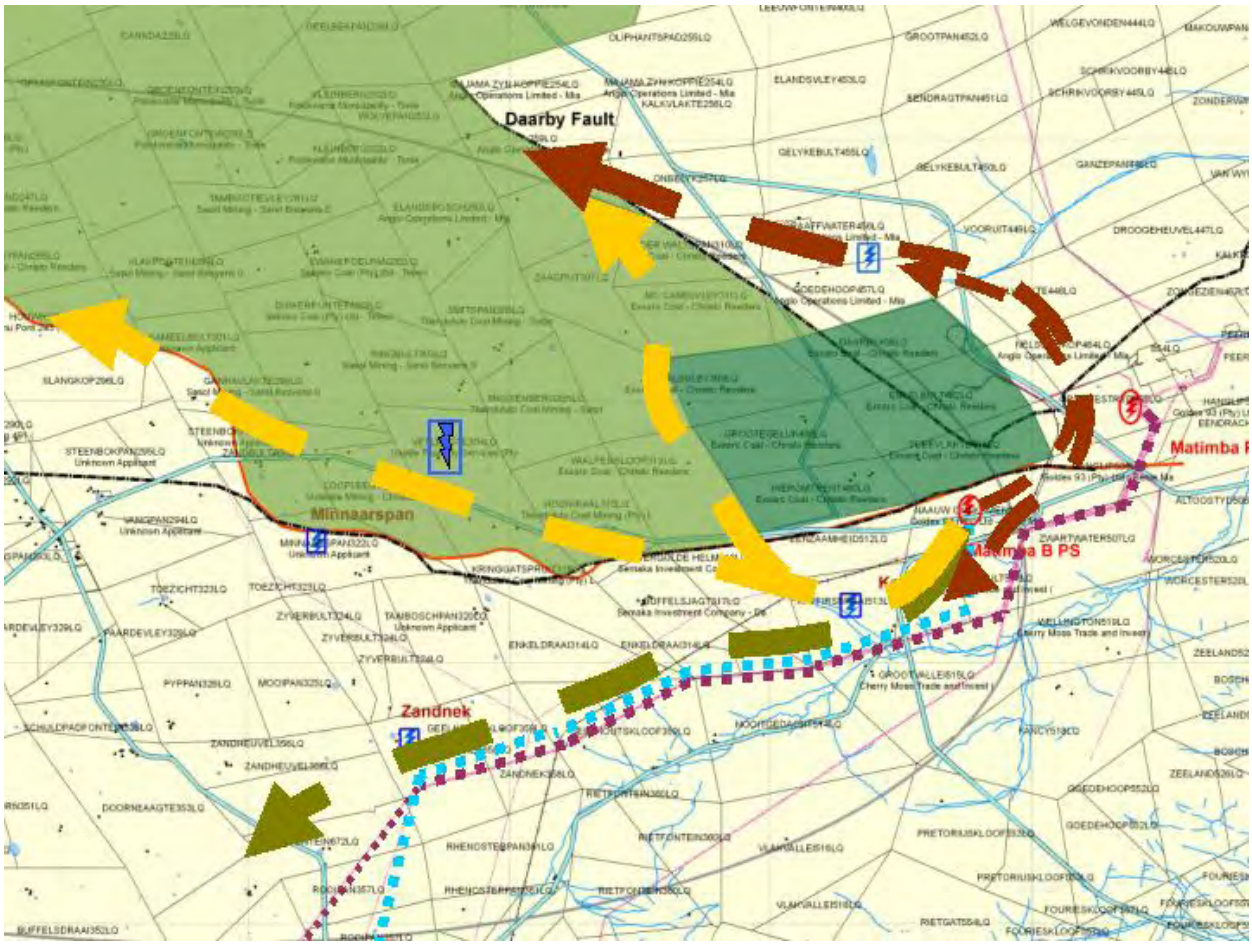


The principle of placing Delta SS close to Matimba B (Medupi) PS is generally sound in that it will be more in keeping with an area this is becoming more industrialised. However, there is a fairly narrow corridor between the Grootegeluk mine in the north and the existing lines to the south. If Delta SS is located at (or near) Kromdraai it will be necessary to run 13 new lines west along this corridor (= 4 x 400kV lines to Mmamabula, 6 x 765kV lines to Epsilon and the three 400kV lines to Brits & Rustenburg). Should Delta SS be placed further west (e.g. at any of the sites mentioned above) the number of lines in this corridor will be reduced by four, and there will be no 765kV lines (= 4 x 400kV to Medupi, 2 x 400kV lines to Witkop, and the three 400Kv lines to Brits & Rustenburg). The significance of this difference needs to be considered further in the EIA phase.

Farm Graaffwater

During the scoping studies and consultation for the Mmamabula-Delta power lines it has become clear that the location of these lines may influence the location of Delta SS. In particular the opportunity to run the new lines close to future mining operations will decide whether the lines run north or south of the Eenzaamheid fault. Should the best route to Mmamabula prove to be a corridor along the northern boundary of the shallow coal fields then a route north from Matimba B (Medupi) PS will need to be found. This means running the power lines east (brown arrows in the figure below) or west (yellow arrows) of the Grootegeluk mine from Matimba B (Medupi) PS. In all cases the 6 x 765kV lines from Delta to Epsilon

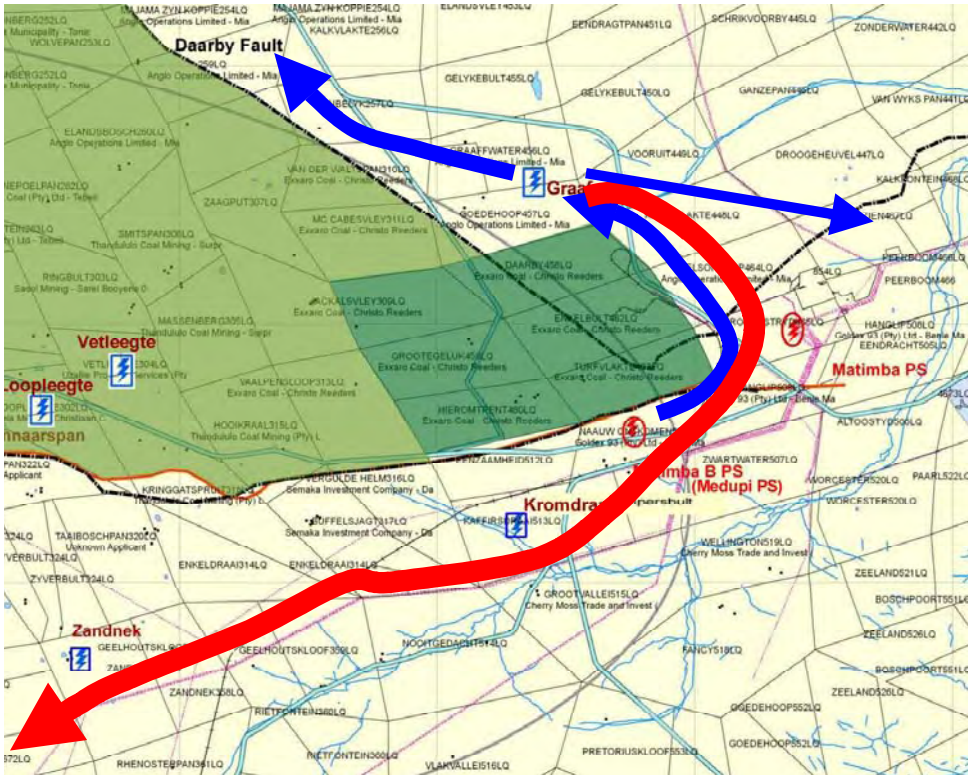
need to be included in the site selection considerations and the corridor (green arrows) defined by the existing lines to the south-west remains an important option.



Exxaro have confirmed their intentions to expand Grootegeluk mine west onto the farms Vaalpensloop and Jackalsvley, and also the possibility of new mining operations on the farms McCabesvley, Zaagput and Van der Waltspan. This will push any western route around Grootegeluk even further west (e.g. the western yellow arrow). An alternative, agreed in principle with Exxaro, is to run the lines in a narrow corridor to the east around the mine (brown arrows). This raises the possibility of locating the substation to the north of the mine, possibly in the vicinity of the Farm Graaffwater.

At this point there appears to be more negatives to this option than positives:

- The site is mine owned land and is near the mine and existing power station, therefore the principle of combining an industrial development with other industrial developments is supported.
- However, Graaffwater is part of the Ferraland nature reserve established by Grootegeluk mine and supports both eco-tourism and local community initiatives. The substation will substantially impact on these activities (though it is acknowledged that the same will apply to Zandnek, Minnaarspan and the other sites identified).
- Delta Substation north of the mine will ‘pull’ the 6 x 765kV an extra distance (compared to Kromdraai) and will need to run next to the 4 x 400kV lines between Matimba B and Delta.



In all scenarios, the existing (three) 400kV lines from Matimba PS and the proposed three new 400kV lines to Dinaledi SS and Marang SS are constant to all options but still need to occupy the same narrow corridor. If the principle of combining development to minimise environmental impact is relevant here, then these lines will have direct influence on the best option for Delta SS and the lines from Matimba B to Delta SS. Moving Delta away from these lines would lose the opportunity to combine impacts of the power lines in an 'industrial corridor'.**MATIMBA B (MEDUPI) SUBSTATION LOCATION**

Given that this substation will lie entirely within the power station site (as per Figure 3.7), the extent on new environmental impact is expected to be small. Hence the focus of the EIA investigations on this element of the Matimba B – Delta project will be to confirm the layout and orientation of the substation in relation to the footprint of Medupi Power Station, and to the site as a whole. The extent of the impacts including visual, ecological, social and heritage will be assessed and reported in the EIR.

4.3. MATIMBA B-DELTA 4 X 400KV POWER LINES

The impacts of the power lines will be dependent on the location of the Delta Substation. This, in turn, will be influenced by the location of the lines to Mmamabula. The assessment will be done in conjunction with the assessment of the proposed power lines to Mmamabula.

5. PUBLIC PARTICIPATION

5.1. PUBLIC PARTICIPATION PROCESS

Public participation provides the opportunity for I&APs to participate in the project on an informed basis. It also ensures that their needs and requirements are considered. In so doing, ownership of the project is vested in both the project proponent and the community.

A Public Participation Process should achieve the following:

- Provide a "vehicle" for public input and the facilitation of negotiated outcomes;
- Create trust and partnerships;
- Minimise negative impacts and maximise positive impacts; and
- Provide an up-front indication of issues which may prevent project continuation, resulting in costly delays, or which may result in enhanced and shared benefits.

5.2. APPROACH

As the Public Participation Process is an integral part of the EIA, the PPP principles listed by DEAT (1998) include:

- Meaningful and timely participation of I&APs;
- Focussing on important issues;
- Due consideration of alternatives;
- Accountability for information used for decision-making;
- Encouragement of co-regulation, shared responsibility and a sense of ownership;
- Application of "due process" particularly with regard to public participation in environmental governance as provided for in the Constitution, and
- The needs, interests and values of I&APs must be considered in the decision-making process.

5.3. METHODOLOGY

The approach towards any PPP is dependent upon the details of the project, the reason being that each project has a particular geographic and technical nature and hence the PPP should be structured accordingly. Where possible and within the required statutory frameworks, it is also desirable to structure such a process to address the process needs of I&APs.

This project consists of the construction of Delta substation and 4 x 400kV transmission power lines from Matimba B power station to the proposed Delta substation. Also included is a new 400kV substation at Matimba B power station, though this will be within the grounds of the power station and no extra land will be required. Due to the nature of this project and other projects in this area, as well as consultation with I&APs to date for other projects, it has become clear that I&APs are aware of this project and have received consultation in this regard to some extent or another. Most I&APs, especially landowners, in the area around Lephalale, are being affected by the four proposed Eskom projects which include:

- The Matimba B Transmission Integration Project (1 x 400kV line to Marang SS near Rustenburg, and 2 x 400kV lines via Spitskop SS (Northam) to Dinaledi SS near Brits)

- The Mmamabula-Delta 4 x 400kV Transmission lines
- Matimba B – Delta 4 x 400kV Transmission lines & substations
- The Delta-Epsilon 6 x 765kV Transmission lines, and Epsilon SS, near Klerksdorp and Potchefstroom.

Various public meetings and open days as well as focus group meetings have been held to date with landowners, the municipality and other I&APs in the study area where all of these projects have been discussed.

Please note that this PPP Report will be presented to I&AP's together with the Scoping Report which will be made available for comment during May 2007. Public Meetings and Open Days have been scheduled and advertised for April where the project will be discussed with I&AP's. All landowners within the study area for this project have been consulted with at various meetings where this project has enjoyed a lot of attention.

A request was also made that the Delta substation studies be conducted with the Mmamabula-Delta Transmission Integration Project, as the location of Delta substation will have an influence on the lines from Mmamabula to Delta and without the location of the substation, I&APs cannot comment meaningful on the impact of both of these projects. As a result of this request and consultation already taken place with I&APs it has been decided that the Scoping Report, showing the preferred locations of Delta substation and the preferred corridors of the transmission lines will be made available for public comment from May 2007.

Please note that for this project all documentation sent out to I&APs has been translated from English into Afrikaans and SeTswana. I&APs have the choice of indicating in which language they want to receive information.

Please note that in an effort to limit the size of this document certain Appendices have not been included as they are contained in the Mmamabula-Delta PPP Report. The Database of registered I&APs and the Comment & Response Document will be contained as Appendices in this report, as well as the BID, advertisement, letter to I&APs and minutes of meetings held in April.

The following methods were used during this round of the process:

5.3.1. Reconnaissance Site Visits

Mr Moses Mhlangu undertook a reconnaissance site visit to the area in 2006, as it was clear that the area for this project would be affected by numerous Eskom Transmission projects.

The reason for the site visit is:

- To develop the preliminary understanding of the social context (representative structures; language; communication media, etc.)
- To identify points where information could be made accessible to the local communities (venues for meetings and public places where information documents could be placed)
- To identify those parties or structures that may be interested in and/or affected by the proposed developments (farming communities; municipalities and tribal lands)

Pre-Application Meeting

The Project Team (the Proponent, Eskom and the Consultant Team) had a pre-application meeting with government officials from DEAT and Limpopo DACE in Pretoria. The scope of the project and the consultation process to be followed was discussed. It was agreed that National and local newspapers will be used to advertise the project and the language of the local communities were identified as being SeTswana, English and Afrikaans.

5.3.2. Stakeholder Identification

Through networking and advertising, I&APs were identified and these I&APs are currently registered on the database. Margen Industrial endeavoured to ensure that individuals/organisations from a 'vertical' (institutional) as well as a 'horizontal' (geographical) point of view were identified.

Geographically, Margen Industrial focused on nearby, adjacent and directly affected landowners, traditional authorities and organisations that represent them. A 'vertical' approach was used to identify those institutions or individuals that might be affected by, or could make a contribution to the project, but who are not necessarily in its direct sphere of impact.

Due to various other projects in the area, most of the landowners in the study area have already been identified, contact details confirmed and have attended at least one previous meeting where this project was also discussed. Government departments and the Lephalale Municipality have also been on the database of other projects and as such have also received information on this project and therefore their details were also known to the consultants at the start of the project. *Please see Appendix 1 for the copy of the I&AP Database.*

The database submitted with this report includes stakeholders from:

- National, Provincial and Local Government
- Landowners
- Non-Governmental Organisations
- Business, Industry & Tourism

Creating awareness

Use was made of newspaper advertisements, a briefing document and personal invitations to pre-identified I&APs to create awareness of the project and to invite the public to the introductory public open days and public meetings in the various areas.

5.3.3. Project Announcement to the Public

Faxed, emailed and posted letters

Immediately after receiving the approval for the Plan of Study for Scoping personalised letters were forwarded to all stakeholders on the database informing them about the project and inviting them to planned public meetings and public open days. A Background Information Document was also included in this package.

The purpose of the BID is to provide I&APs with background information on the Environmental Impact Assessment Process, the Public Participation Process, and the need for the Proposed Matimba B - Delta Transmission Integration Project. It also provides information on where the lines might go and specialist studies to be conducted as part of the

process. It provides persons, who are interested and/or affected by the project, with the opportunity to register as an I&AP. As part of the BID, a register and comment sheet is provided to enable the public to register as an I&AP and to provide the consultants with written comments. *Please see Appendix 2 for a copy of this package*.

Media Advertisement

Advertisements were placed in national and local newspapers inviting I&APs to register to receive information on the project and inviting I&APs to attend public meetings and open days to be held in the study area. The following newspapers were used *(Please see Appendix 3 for a copy of the advertisement)*:

Newspaper	Date	Extent	Area	Language
Citizen	26 Jan 07	National	Limpopo	English
Beeld	26 Jan 07	National	Limpopo	Afrikaans
Sowetan	26 Jan 07	National	Limpopo	SeTswana
The Mogol Post	26 Jan 07	Local	Lephalale	English; SeTswana; Afrikaans

Street Lamp Posters

The English version of the advertisement will be enlarged into an A1 size poster that will be placed at strategic points on the streets (taxi ranks; shopping centres and public pay points like post offices and municipal offices) where public meetings and public open days will be held. On-site advertisements will also be placed at strategic positions within the study area. The same poster used for the Street Lamp Poster will be used for the On-site advertisement.

Information Points

Information points were identified and will be updated for the duration of the project and will contain all relevant information of the project. I&APs can visit these information points at their leisure and receive information on the project.

The information points have BIDs, maps and will also have copies of the Scoping Report and Environmental Impact Report.

Additional Invitations

Various organisations were identified through the Internet or referrals and these organisations were sent invitations to the Public Open Days and Public Meetings. These include Church Groups, Chamber of Commerce, Hunting Organisations, Youth Councils, Women's Organisations, Wildlife Groups, Farmers Associations, etc.

5.3.4. Meetings, Open Days and Workshops

Different groups of stakeholders were identified and registered as Key Stakeholders. These Key Stakeholders are directly affected by the proposed project and need to be consulted with separately and individually. The database for this project was taken from the databases of the Matimba B Transmission Integration project and the Mmamabula-Delta Transmission Integration Project. The I&APs included in the databases for these two projects include all I&APs for this project. These groups include: Farmers Associations (FAs) and District Farmers Unions (DFUs),

Local Governments (Municipalities), Traditional Authorities and various other groups, as identified throughout the process.

3.3.1 Farmers (DFU and FA)

Consultation with the FA's began in August 2006 with consultation for the Matimba B Transmission Integration Project. At the meetings for the Matimba B Project mention was made of all the projects planned for the Lephalale area.

A meeting was also held on 1 November 2006 in Lephalale with representatives of both AGRISA and TLUSA to discuss all the projects that are planned for the area.

At this meeting, the location of Delta substation was debated as well as other projects. At this meeting it was also requested that Eskom consider moving the location of Delta closer to Matimba B power station and also to consider putting the substation on mine or Eskom property. At this meeting it was indicated that this would be investigated.

Public Meetings and Public Open Days were held on 21 November 2006 in Lephalale and 22 November 2006 at Steenbokpan for the Mmamabula-Delta Transmission Integration Project. Once again, at these meetings, the Delta substation and lines from Matimba B power station to Delta were discussed and debated.

A Focus Group Meeting was then held on 10 February 2007 at Steenbokpan for the Mmamabula-Delta Transmission Integration project. At this meeting it was also brought to the consultant's attention that the Steenbokpan Omgewingsforum has been established and represents all landowners in the study area who wish to become part of this forum. Once again the Matimba B – Delta project was discussed and debated. Two important issues came from this meeting and will be discussed:

1. The studies for the Matimba B – Delta project need to run concurrently with the Mmamabula-Delta project. The reason for this is that the location of the Delta substation will have an impact on the lines from Mmamabula to Delta and stakeholders cannot comment meaningful on the impact of the Mmamabula-Delta lines without knowing where Delta substation will be located.

2. Meetings with I&APs in this area need to discuss all the projects at every meeting. The reason for this is that there are currently 4 Eskom Transmission projects that are being planned for this area. As these projects are not conducted simultaneously, some confusion exists as to which project is being discussed and where in the EIA process each project is.

The following decisions have therefore been made with regards to points number 1 and 2 mentioned above:

1. The Scoping Report and PPP Report will be drawn up and made available for public review in May 2007. Telephonic consultation will also take place with members of the FAs and also the Steenbokpan Omgewingsforum to ensure that all landowners know about the meetings in April and also know exactly what the Matimba B – Delta project entails.

2. At all meetings scheduled for the future, whether it be a public meeting, a focus group meeting or a key stakeholder workshop, all projects that have an effect on this area will be discussed, with a brief summary of each project and what is currently happening with each project.

3.3.2 Local Governments (Municipalities)

Only one municipality is affected by this project – the Lephalale Municipality. As a result of poor attendance by municipalities and ward councillors from previous projects, it was decided to attend a General Council Meeting of Lephalale Municipality.

The first meeting with the Lephalale Municipality was held in August 2006 where the Mayor as well as Municipal Manager attended. At this meeting, which was for the Matimba B Transmission Integration Project, the other planned Eskom projects were also presented, which included the Delta substation.

A General Council Meeting was held on 28 November 2006 and was attended by die Environmental Consultants who did a brief presentation on all the planned Eskom projects in the area, which includes this Matimba B – Delta project. At this meeting it was indicated that the consultants can and will attend follow-up meetings or special meetings with the municipality if so requested.

The officials of the municipality and councillors are also included in the database for this project, as well as for other projects. This means that they also receive the BID and letters inviting them to the public meetings and open days and which letter and BID also includes relevant project information. Departments and officials are welcome to contact the consultants for meetings and/or additional information.

3.3.3 Traditional Authorities

This study falls in one province, namely Limpopo. It was ascertained at the beginning of this project that no Traditional Authorities will be affected by the proposed project.

Mr Kekana, who is the Responsible Person for Traditional Affairs in Limpopo Province, is registered on the database and continues to receive project related information.

3.3.4 Public Open Days (POD)

The main objective of an open day is to give the public the opportunity to become involved in the project and to provide their inputs. PODs are an important platform for information assimilation during the consultation process. New issues are recorded and debated.

Two PODs are scheduled for April 2007, one in Lephalale on 13 April 2007 and one in Steenbokpan on 14 April 2007. The POD is combined with a Public Meeting later in the day. The POD starts at 11:00 and continues until 15:00.

3.3.5 Public Meetings

PMs are an important platform for information assimilation during the consultation process. New issues are recorded and debated. Thus the purpose of the introductory public meetings was to:

- Provide information on the EIA;
- Identify issues and concerns;

- Identify and register I&APs;
- Provide information on the technological alternatives;
- Provide information on the specialists studies that are and will be undertaken;
- Provide information on the PPP;
- Outline the way forward in terms of the process.

For this project, the findings of the Scoping Report will be presented at the public meetings through a powerpoint presentation. The presentation will also include technical information from Eskom as to why this project is necessary and will also include information on the EIA Process and the PPP.

Two PMs will be held – one in Lephalale on 13 April 2007 and one in Steenbokpan on 14 April 2007. The PMs are combined with the POD and start at 16:00 in the afternoon. The reason for starting at this time is to accommodate any working I&APs and also to accommodate any I&APs who do not want to travel at night.

3.3.6 Requests for information from Government Departments

Various government departments were included in the database from the beginning and have received all relevant correspondence relating to the project including the BID, letter and invitation to the public meetings and open days. They will also receive a letter, with the Executive Summary of the Scoping Report, indicating that the Scoping Report is available for comment. For a full list of the government departments please refer to the database. Some departments did send representatives to the public meetings. Separate meetings will not be held with these departments, unless requested by them.

Information has been requested from the Department of Agriculture with regards to Emerging Black Farmers for the Mmamabula-Delta Transmission Integration Project and for the Matimba B Transmission Integration Project. The information received from this department will be used for the Matimba B – Delta Project.

Information has also been requested from the Department of Land Affairs with regards to properties that have land claims registered against them for the Mmamabula-Delta Transmission Integration Project and for the Matimba B Transmission Integration Project. The information received from this department will be used for the Matimba B – Delta Project.

On-going communication

Margen Industrial contact details were provided on all communications. I&APs phoned to register, obtain information and to raise issues. These issues were recorded in the issues register and their details recorded in the database.

3.6 Additional Information to Date

The Scoping Report will be available for public review from 2 May 2007 to 30 May 2007 (*see Appendix 4 for advertisement*). Letters will be sent out to all registered I&APs on the database. Email notices will also be sent out to all registered I&APs with email addresses.

This Addendum was advertised in the Mogol Post and the comment period is from 2 May 2007 until 30 May 2007.

Two public open days and public meetings were arranged for Lephalale and Steenbokpan for 13 and 14 April 2007. These meetings were part of a series of meetings arranged for the Delta-Epsilon and Matimba-Delta projects. As per previous requests from stakeholders in this area, all projects that might affect this area were discussed at these meetings. *Please see Annexure 5 for a copy of the minutes of the meetings held at Lephalale on 13 April and Steenbokpan on 14 April*.

Attendance at these meetings was fairly high with more than 100 people attending the public open days and public meetings over the two days.

An advertisement was placed for these meetings in the local newspaper, as well as street lamp posters, flyers in post boxes in Lephalale and Steenbokpan and letters sent to all registered I&APs on the database.

5.4. OVERVIEW OF ISSUES RAISED BY THE PUBLIC

The issues and questions raised will be addressed in the Scoping Report where possible and also in the Environmental Impact Report. *Please see Annexure 6 for a copy of the Comment & Response Document.*

5.5. CONCLUSION

Based on the inputs received during the PPP conducted so far, the following conclusions can be made:

- Communication with I&APs, especially the communities surrounding the potential corridor/s and substation sites, should continue to ensure informed decision-making and a transparent process throughout.
- Ongoing communication with the Landowners directly affected by the potential corridors and substation sites in focus group meetings should continue. Landowners should be encouraged to attend these meetings.
- The aim of this PPP process was to identify issues and concerns in order to feed it into the technical and planning processes with a view to developing measures for successful mitigation/ avoidance of negative impacts.
- A number of issues and concerns have been identified and these are addressed in the Comments and Response Document.

6. CONCLUDING REMARKS

The Scoping Report provides an overall summary of the work done to date in the Scoping Phase of the study. At Scoping Phase level, there may be site-specific information for different areas of the study area that may be missed. The main purpose of submitting this document for public review is to check the information and findings against local knowledge. Hence feedback received will be used to update the report before submission to the authorities for approval, and to refine the scope of work for studies undertaken in the EIA phase.

A considerable level of public consultation has already taken place on this project, particularly regarding the location of the Delta SS. Two main issues were identified during the public participation process. These were:

- The studies for the Matimba B – Delta project need to run concurrently with the Mmamabula-Delta project. The reason for this is that the location of the Delta substation will have an impact on the lines from Mmamabula to Delta and stakeholders cannot comment meaningful on the impact of the Mmamabula-Delta lines without knowing where Delta substation will be located.

- Meetings with I&APs need to discuss all the projects at every meeting as there are currently several Eskom Transmission projects that are being planned for this area. As these projects are not conducted simultaneously, some confusion exists as to which project is being discussed and where in the EIA process each project is.

It was decided that in reponse to the above, the Scoping Report (and PPP Report) will be drawn up and made available for public review in May 2007 in order to bring the submission of the Environmental Impact Report (EIR) for public comment at the same time as the EIR for the Mmamabula – Delta lines.

It was also decided that at all meetings scheduled for the future (whether a public meeting, a focus group meeting or a key stakeholder workshop), all projects that have an effect on the area will be discussed, with a brief summary of each project and what is happening with each.

APPENDICES IN VOLUME I OF THE MMAMABULA-DELTA 4 X 400KV TRANSMISSION LINE SCOPING REPORT THAT HAVE RELEVANCE TO THIS STUDY

DEVELOPMENT PLANS IN THE WATERBERG COALFIELDS AREA: 2006 TO 2026	APPENDIX I-1
ESKOM TRANSMISSIE ONTWIKKELINGSPLANNE VIR DIE WATERBERG STEENKOOLVELDE 2006 TOT 2026	APPENDIX I-1
TECHNICAL NOTES	
TECHNICAL NOTE: GENERIC ENVIRONMENTAL ISSUES	APPENDIX I-2A:
TECHNICAL NOTE: LIGHTNING	APPENDIX I-2B
TECHNICAL NOTE: UNDERGROUNDING	APPENDIX I-2C:
ESKOM STANDARDS: SERVITUDE MAINTENANCE CYCLE – TRMBPAAB8	APPENDIX I-2D
ESKOM STANDARDS: FIRE PROTECTION ASSOCIATION-TRMNUMBER	APPENDIX I-2E:
ESKOM STANDARDS: FARM ACCESS GUIDELINES - TRMPVACV2	APPENDIX I-2F:
SEPARATION OF POWER LINE CORRIDOR	APPENDIX I-3:
SKEIDING TUSSEN KRAGLEIDINGS	APPENDIX I-3
VISUAL ASSESSMENT	APPENDIX I-4
HERITAGE ASSESSMENT (INCL. ARCHAEOLOGICAL ASSESSMENT)	APPENDIX I-5
AVIFAUNA ASSESSMENT	APPENDIX I-6:
BIODIVERSITY ASSESSMENT	APPENDIX I-7
SOCIAL IMPACT ASSESSMENT	APPENDIX I-8
PEDOLOGY ASSESSMENT	APPENDIX I-9
GEOLOGICAL ASSESSMENT	APPENDIX I-10:
BASIC EIA PROCESS LAYOUT	APPENDIX I-11:
ESKOM GENERAL NEED AND JUSTIFICATION	APPENDIX I-13: