

Mr Kosalin Naicker
Acting Executive Director Human Settlement
Nelson Mandela Bay Metropolitan Municipality
P.O. Box 11
PORT ELIZABETH
6000

Date:
30 May 2012

Enquiries: LL Mokgwathheng
Tel +27 11 800 6812

Dear Mr Naicker

NUCLEAR THYSPUNT 400KV LINES INTEGRATION PROJECT

The comments received as per the attached letters from the Department of Public Health dated 03 November 2011 (Annexure "A") and from the Department of Human Settlement dated 07 November 2011 (Annexure "B") of the Nelson Mandela Bay Metropolitan Municipality (NMBMM), as well as the minutes (Annexure "C") of the meeting held on 24 February 2012 have reference.

ISSUES RAISED BY NMBMM

The correspondence sets out the reasons for the NMBMM's opposition to Eskom's suggested locations for the proposed Transmission (Tx) substation and 5x400kV power lines (*i.e.* 2x400kV power lines within the Southern Corridor and 3x400kV power lines within the Northern Corridor) of the Nuclear Thyspunt Transmission Lines Integration Project (Nuclear TTLIP). These are the reasons in brief:

1. The possible effect of the proposed substation position on the Uitenhage Nodal area
2. The non-feasibility of the area between KwaNobuhle and Hopewell
3. Re-alignment of the Southern Corridor
4. The impact of the Southern Corridor on the proposed Jachtlakte Sustainable Human Settlement Plan
5. The impact of the proposed Northern Corridor on future developments in the northern parts of Uitenhage in terms of the Metro SDF

Each of the above issues will be addressed in detail below.

1. The possible effect of the proposed substation position on the Uitenhage Nodal area

The location of the proposed substation in the Uitenhage Nodal area is acceptable from the environmental perspective.

The EIA process considered the entire (elliptical) area for the location of the proposed Port Elizabeth substation in the EIA studies. No particular environmental sensitivities (with the exception of a few wetlands within the study area) were identified by the EIA. Thus both the proposed substation location (as identified by the NMBMM's fatal flaw study), as well as the

area adjacent to the Sans Souci substation would be acceptable from an environmental perspective. In this case, the geotechnical assessment study (Annexure "D" attached hereto) will be the determining factor regarding the location of the substation.

2. The non-feasibility of the area between KwaNobuhle and Hopewell

The 100m corridor allocated by NMBMM between KwaNobuhle and Hopewell was ruled out as an option for the power lines due to a fatal flaw identified by the Social Specialist study, as well as the visual concerns relating to the impact of the proposed lines on receptors within Hopewell. As a result, the Southern Corridor was moved to the north to run through an open area within KwaNobuhle.

It is suggested that the NMBMM provide Eskom with the layout plan of the Coega Logistic Park to enable Eskom's design engineers to investigate the possibility of a route alignment which will have the least impact on the proposed Coega Logistic Park.

3. Re-alignment of the Southern Corridor

As agreed with NMBMM officials in October 2011, the Southern Corridor can easily be modified to exclude and thus avoid KwaNobuhle Ext 11 proposed development area. The realignment to the south will avoid this area. The realignment will be taken into account as part of the final EIR.

4. The impact of the Southern Corridor on the proposed Jachtylakte Sustainable Human Settlement Plan

Although the Southern Corridor transverses the Jachtylakte Study Area, the proposed development to be undertaken by NMBMM will be considered in Eskom's final route selection within the proposed route corridor. Eskom takes cognizance of land use norms and adheres to governing legislation and standards regarding land uses (including crossing/running parallel to servitudes).

As part of the compliance process, the owner of bulk service lines (i.e. water, sewage and electrical) will be requested by Eskom to provide accurate details of buried services that occur within the corridor before final alignment of the route. This information will be used by Eskom's design engineers to template the transmission lines so that buried and visible services are not impacted. The transmission line profiles will be sent to the owner of the services formally requesting approval to cross/run parallel to such services. The service owner will then be at liberty to impose such restrictions and conditions as is deemed appropriate during construction, commissioning and operation.

It is important to note that once the Environmental Authorisations are granted by Department of Environmental Affairs (DEA), Eskom will consult the affected landowners to jointly identify where it is most suitable for the power lines to be routed within the approved corridor. It is therefore pre-mature to decide where the final servitude alignments of the lines will be, based on the *Preliminary* (our emphasis) Development Framework Plan for Jachtylakte Precinct Plan from the NMBMM without the Environmental Authorisations for Nuclear TTLIP from DEA.

The expansion of the existing footprint of the NMBMM's San Souci substation will not have any impact on Eskom, except that Eskom will have the responsibility of acquiring servitudes from its Port Elizabeth substation to NMBMM's San Souci substation.

5. The impact of the proposed Northern Corridor on future developments in the northern parts of Uitenhage in terms of the Metro SDF

Considering the current land use, the proposed Eskom's infrastructure (*i.e.* power lines and towers) will not sterilise the area on which they are located. The restrictions imposed by Eskom regarding activities within a power line servitude will address safety (*i.e.* the Occupational Health and Safety Act and Regulations) and technical issues. Regarding your proposed future developments, it would be advisable if you could forward the specific development plans which we will consider during the final alignment of the proposed power lines.

The NMBMM's proposal to realign the Northern Corridor to the north of the Springs Nature Reserve is not supported from an environmental perspective for the following reasons:

Routing the 3x400kV power lines to the north of the Springs Nature Reserve (the nature reserve) would have greater environmental impact on the natural areas of thicket (valley bushveld) to the north of the nature reserve, than in the largely impacted and transformed area between Uitenhage and the nature reserve. This will cause significant environmental impact including fragmentation, edge effect as well as potential knock-on socio-economic effects.

The original 5km-wide scoping corridor only covered a part of the reserve and the area to the north of the reserve was never assessed as part of this EIA. Re-routing the lines to the north of the Springs Nature Reserve will require a new EIA process. This will have significant cost, time and risk implications for the entire project.

NMBMM'S INVOLVEMENT IN THE PROJECT

As evidenced from the sequence of events (Annexure "E" attached hereto) and Eskom's letter to NMBMM dated 8 December 2009 (Annexure "F" attached hereto), Eskom and SiVEST (*i.e.* the appointed Environmental Assessment Practitioner for Nuclear TTLIP) involved the NMBMM in the Nuclear TTLIP since the 17th October 2008.

The NMBMM's delay in raising the serious comments reflected in the letters due to "miscommunication and other technical glitches" has seriously compromised the Nuclear TTLIP. The Nuclear TTLIP is now at the final EIA phase and DEA has indicated its concern with regard to delays in finalising the EIA process. Any additional delay will have a negative impact on the progress of the Nuclear TTLIP and the proposed nuclear generation power plant in Oyster Bay.

CONCLUSION

Eskom has provided detailed responses to the issues raised by the Department of Public Health and the Department of Human Settlement of the NMBMM. However, the crucial issue that is, the NMBMM's opposition to Eskom's siting of the proposed infrastructures (*i.e.* Tx substation and 5x400kV power lines) of the Nuclear TTLIP must still be resolved.

In determining the way forward, Eskom is of the view that the interests of both parties should be considered. In the spirit of co-operative governance, a meeting has been scheduled for 7 June 2012. We believe that the meeting should be attended by senior officials from Eskom and NMBMM who are delegated to take decisions on these matters.

The purpose of the meeting will be:

- to identify and agree on alternative sites for the substation within the studied EIA corridor. The suitability of these sites will be assessed by Eskom's geotechnical specialist;

- to discuss and evaluate the implications of different re-alignments of the Southern Corridor with the alternative substation sites; and
- to confirm the Northern Corridor alignment.

The decisions to be made at the proposed meeting will be included in the Final Environmental Impact Assessment report, which will be issued to the Interested and affected parties for final review before submission to the Department of Environmental Affairs for a decision. As per our revised schedule, we have planned to complete this process by 31 October 2012, hence it is important that a decision be reached at the proposed meeting.

Yours sincerely



Mmamoloko Seabe
SENIOR MANAGER LAND DEVELOPMENT

CC: Mr S Potgieter
Assistant Director Land Planning and Management
Nelson Mandela Bay Metropolitan Municipality
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Annexures

Annexure "A" - Letters from the Nelson Mandela Bay Metropolitan Municipality dated 3 November 2011

Annexure "B" - Letters from the Nelson Mandela Bay Metropolitan Municipality dated 07 November 2011

Annexure "C" – Minutes of meeting held on 24 February 2012

Annexure "D" - Geotechnical Investigation Study Report (July 2011)

Annexure "E" - Sequence of events of consultations between Eskom and the Nelson Mandela Bay Metropolitan Municipality regarding the Nuclear TTLIP

Annexure "F" - Eskom's recommendation for work to be conducted by SiVEST for the Nelson Mandela Bay Metropolitan Municipality's Environmental Fatal Flaw Analysis for the proposed location of 132kV lines and substation (Uitenhage Nodal Substation)

Your Ref: Eskom TTLIP 9520

Our Ref: 19/3/1/1/3

Deals with this matter: Joram Mkosana

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website: www.nelsonmandelabay.gov.za

To: Snr Public Participation Practitioner
Sivest Environmental Division
PO Box 2921
Rivona
2128

Date: 3 November 2011

Attention: Nicolene Venter

RE: THYSPUNT NUCLEAR 400KV INTEGRATION PROJECT

The Nelson Mandela Bay Municipality requested that Sivest grant an extension on the Public Participation period and attend a site visit and meeting to resolve conflicts regarding the proposed Thyspunt Transmission lines and substations. The meeting and site visit was conducted on the 18 October 2011 and was attended by Sivest: Environmental Division, Eskom representatives and various municipal officials.

Electricity and Energy

The Comments for Electricity and Energy is based in terms of the latest proposed HV master plan of the Nelson Mandela Bay Municipality.

Our comments on the existing Eskom plans are simply that the proposed substation position (Uitenhage Nodal on the attached drawing) is very far from our existing San Souci substation where we will be taking the power from Eskom. This means that Eskom will have to provide a servitude wide enough to build three 132kV monopole power lines from their substation to our San Souci to cater for the demand we will put on them at the new substation in the future. This will sterilize a large portion of our land in the vicinity.

The current proposed position of the two 400kV lines through Jagvalkte cuts straight through the industrial developments at the Coega Logistics Park. This will impact on the proposed economic development of the area as these sites were to provide Logistic support to the large motoring industry in Uitenhage. The NMBM has allocated an area between Kwanobuhle and Hopewell, which is large enough to accommodate the lines. The site visit with Sivest and Eskom indicated that the 400kV lines could be built in this space.

The NMBM must therefore regard in existing proposal to route the lines through Logistic Park as a fatal flaw.

Environmental Management

The potential conflicts are listed, they may be found acceptable with adequate mitigation:

1. The municipal reserves within the Nelson Mandela Bay Municipality should be avoided completely and mitigation measures must be implemented against visual impacts.
2. The area between Rocklands, Elands River and Groendal is composed of Rocklands Renoster thicket. In terms of mitigation, the vegetation must not be disturbed and existing development footprints should be utilized. Any disturbance must be kept to the periphery of sensitive areas. There may be potential visual impact at the entrance of a Wilderness area, the Groendal Natures Reserve to be incorporated as part of the Baviaanskloof Mega Reserve.
3. The NMBM has agreed upon 100m servitude within Kwanobuhle Area 11. This servitude will be reserved by Electricity and Energy for the purpose of the corridor. This area lies routed along the boundary of the Hopewell Conservation Estate.
4. The powerline must run along the northern boundary of the Springs Nature Reserve as opposed to the proposed southern boundary of the reserve. Again visual impacts must be mitigated adequately. The power line cannot run between Uitenhage and the Springs Nature Reserve.
5. The San Souci power station proposal is accepted by Environmental Management, provided that the impacts within the Critical Biodiversity Areas (CBAs) area is kept to a minimum and that mitigation measures be implemented to prevent the loss of any important biodiversity features.
6. The sections where the Swartkops River will be crossed must be limited or the line must jump areas of sensitivity.
7. In areas where CBAs will be crossed, it will be preferred that the power line is restricted to disturbed areas, or along the boundary of the CBAs.
8. The intact Bonteveld patches between Coega and Grassridge must not be disturbed and adequate mitigation measures must be implemented around such sensitive sites.
9. The Environmental Management Sub-directorate of the NMBM must be included in the team that ground truths the final alignment of the power lines to ensure that impacts to CBAs are limited.

The above mentioned comments must be read in conjunction with the 3 maps attached.

p.p. 

Yours faithfully

JORAM MKOSANA
DIRECTOR: ENVIRONMENTAL MANAGEMENT

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PO Box 9, Port Elizabeth 6000

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Your Ref: Eskom TTLIP 9520

Our Ref: 19/3/1/1/3

Date: 07 November 2011

DEALS WITH THIS MATTER: SCHALK POTGIETER

SUB-DIRECTORATE: LAND PLANNING AND MANAGEMENT

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e-mail: spotgiet@mandelametro.gov.za

Senior Public Participation Practitioner
Sivest Environmental Division
PO Box 2921
Rivonia
2128

Attention: Nicolene Venter**per electronic mail:** NicoleneV@sivest.co.za

Dear Nicolene

THYSPUNT NUCLEAR 400KV INTEGRATION PROJECT

Our site visit on 18 October 2011 as well as the Multi-Disciplinary Technical Task Team meeting where the above matter was discussed, has reference.

Please once again accept our apology for the delayed response which resulted from miscommunication and other technical glitches. However, herewith our response in respect of the spatial planning matters. Additional comments iro of the environmental and electricity matters have been forwarded to you under cover of a letter from our Public Health: Environmental Management Directorate.

This technical input covers three aspects i.e.: (i) the implication of the Northern Corridor on proposed future spatial development iro the Metro SDF; (ii) the implication of the Southern Corridor iro the proposed Kwanobuhle Ext 11 project and (iii) the implications and constraints of the Jachtylakte Sustainable Human Settlement Plan.

Norther Corridor and Metro SDF

Please read our comments in this respect with the spatial material that has been provided to Paul de la Cruz via the office of our Mr Stuart Beattie.

The general concern is that the proposed Northern Corridor would sterilize significant portions of future developments in the northern parts of Uitenhage. A re-alignment of the corridor to a potion above the Springs Resort area would minimize the impact on future development.

**PROJECT: JACHTVLAKTE SUSTAINABLE HUMAN SETTLEMENTS PLAN
MINUTES OF THE SPECIAL MEETING – ELECTRICAL SERVICES PLANNING MEETING**

Date: 22 February 2012 , Wednesday

Time: 14h00

Venue: Aurecon Port Elizabeth

1.1 ATTENDANCE

1.1.1 PRESENT

Title	Name	Organisation	Abbr. used in the minute	
Mr	Lutando Maboza	NMBM	LM	NMBM
Mr	Schalk Potgieter	NMBM	SP	NMBM
Mr	Roark Prinsloo	NMBM	RP	NMBM
Mr	Harold Gadlamba	NMBM	HG	NMBM
Mr	Joram Mkosana	NMBM	JMko	NMBM
Mr	Carel van Dyk	NMBM	CvD	NMBM
Mr	Marius van Jaarsveld	Aurecon SA (Pty) Ltd	MvJ	AUR
Mr	Ossie Long	Aurecon SA (Pty) Ltd	OL	AUR
Ms	Deveda Domingo	Aurecon SA (Pty) Ltd	DD	AUR
Mr	Rob Gardiner	SRK	RG	SRK
Mr	Brendan Hindes	Setplan	BH	SET
Mr	Paul da Cruz	Sivest	PdC	SIV
Ms	Lerato Mokgwatheng	Eskom	LarM	ESK

1.1.2 APOLOGIES

Title	Name	Organisation	Abbr. used in the minute	
Ms	Karissa Nel	SRK	KN	SRK
Mr	Adriaan van Eeden	Aurecon SA (Pty) Ltd	AvE	AUR

1.1.3 NEXT MEETING

To Be Confirmed if a follow up meeting would be necessary.




ITEM	DESCRIPTION	ACTION
1.2	WELCOME AND ATTENDANCE	
1.2.1	OL from AUR chaired the meeting and welcomed all present	Noted
1.2.2	Special welcome to Paul da Cruz from Sivist, Lerato Mokgwathheng from Eskom, Joram Mkosana from NMBM Environmental management, Carel van Dyk and Roark Prinsloo from Munelek.	Noted
1.2.3	Attendance Register was circulated for signature and is attached as ADDENDUM A . Apologies made and recorded above.	Noted
1.3	JACHTVLAKTE PRECINCT	
1.3.1	SP provided a brief background and history of the project for the benefit of new members to the meeting.	
1.4	ESKOM THYSPUNT LINES	
1.4.1	PdC noted that the alignment shown on the Jachtlakte drawings from SET is still proposed. PdC provided a brief overview of past, current and future plans of Eskom Power lines and substations.	Noted
1.4.2	PdC noted that the proposed alignment that runs through the Development area is dependent on the location of the substation.	Noted
1.4.3	LarM from Eskom noted that a process was followed to determine the proposed route. A Geotech Specialist was appointed to investigate the best possible location of the new substation. A recommendation was made that the soil conditions for a development next to the San Souci substation are not suitable and that this option be removed from all future plans and that alternative locations provided. A plan was produced which reflected alternative positions A & B as selected by the ESK Geologist – seemingly without reference to property rights & ownership.	Noted
1.4.4	BH requested that ESK and Munelek provide substation alternatives A and B so that they can be placed on the project Layout.	LarM/ CvD
1.4.5	BH to submit current Framework planning information for all Bulk services, Roads and Rail to ESK and Munelek.	BH
1.4.6	CvD from Munelek noted that the Metro planned future expansion of the San Souci substation! CvD requested that LarM provide findings from the investigation on why the immediate vicinity next to the San Souci substation cannot be used by Eskom.	LarM
1.4.7	LM from NMBM noted that future consultation is needed between Munelek, ESK and SET as all elements of the project need to be taken into account.	BH
1.5	WAY FORWARD	
1.5.1	SET are to submit plans & details to ESK and Munelek by Monday 27 Feb 2012.	BH
1.5.2	ESK and Munelek to resolve discussion on San Souci Substation and inform AUR and SET.	LarM/ CvD
1.5.3	Munelek and ESK to provide feedback by 1 March 2012.	LarM/ CvD
1.5.4	SRK to provide Bio Regional Plan to ESK and Munelek as well as specialist studies report findings.	RG

ITEM	DESCRIPTION		ACTION
1.6	NEXT MEETING		
1.6.1	To Be Confirmed		All
1.7	APPROVAL OF MINUTES		
	CLIENT :	NMBM	DATE
	Lutando Maboza		
	PRINCIPAL AGENT:	AURECON	DATE
	Ossie Long		

ADDENDUM A - ATTENDANCE REGISTER / COMMUNICATION SCHEDULE

PROJECT NAME : Jachtylakte Sustainable Human Settlement Plan									
MEETING		VENUE:		Date		Time			
Special Meeting - Electrical Services Planning		Amstel Port Elizabeth Main Boardroom		Thursday, 23 February 2012		14:00			
ATTENDANCE REGISTER / COMMUNICATION SCHEDULE									
No.	Title	Name	Surname	Role / Job Title / Skill	Tel	Fax	Cell	E-mail	Signature
Aurecon									
1	Mr	Adrian	Van Eeden	Unit Manager	041 503 3000	083 600 4037	082 951 1473	Adrian.vanEeden@aurecongroup.com	
2	Mr	Marius	Van Jaarsveld	Project Director (Bulk Supply & H&M)	041 503 3000	083 600 4037	083 449 0821	Marius.Vanjaarsveld@aurecongroup.com	
3	Mr	Oswald	Joosten	Project Leader	041 503 3622	083 600 4037	083 453 5427	oswald.joosten@aurecongroup.com	
4	Mr	Oswald	Joosten	Assistant Project Leader	041 503 3600	083 600 4037	076 077 6400	Oswald.Joosten@aurecongroup.com	
NMCM - Clients									
1	Mr	Uthman	Mashera	Client Representative	041 505 5197	041 506 2100	044 505 7138	uthman@mandelametro.gov.za	
2	Mr	Machobane	Phiso	NMCM	041 505 2270		076 440 0009	machobane@mandelametro.gov.za	
3	Mr	Schale	Phiso	NMCM	041 505 2100		082 374 1233	Schale@mandelametro.gov.za	
4	Mr	Joseph	Testino	NMCM	041 505 2154		082 410 5177	JT54151@mandelametro.gov.za	
5	Mr	Curro	Buller	NMCM	041 505 2100		076 535 7309	curro@mandelametro.gov.za	
6	Mr	Calvin	Drummer	NMCM	041 505 390		066 53 7774	calvin@mandelametro.gov.za	
7	Mr	Wendell	Grimes	Land Planning	041 506 2154			wendell@mandelametro.gov.za	
Sub Consultants									
1	Mr	Brandon	Edwards	Team planner - Seblan	041 505 1795	041 505 1765	082 787 9350	brandon@seblan.co.za	
2	Mr	Fred	Van der	Team planner - Seblan	041 505 1795	041 505 1765	042 858 9730	fred@seblan.co.za	
3	Mr	Ruf	Griffin	GIS consultancy services - GRK	041 505 0600	041 509 4000	041 007 7000	ruf@grk.co.za	
4	Mr	Karlson	Nel	GIS consultancy services - GRK	041 505 0600		064 503 5770	karl@grk.co.za (a palatine)	
5	Mr	John	Maling	Land Planner - John Maling and Assoc	041 505 5189	041 030 7855	083 854 5287	john@johnmaling.co.za	
NMCM Task Team									
1	Mr	Rene	Edwards	Electrical <i>hannings</i>	041 505 0219			rene@mandelametro.gov.za	
2	Mr	Rene	Edwards	Electrical	041 505 0219			rene@mandelametro.gov.za	
3	Mr	Henk	Edwards	Electrical - Munkie	041 505 0219	041 002 0002	079 480 585	henk@mandelametro.gov.za	
4	Mr	Joan	Edwards	Electrical <i>hannings</i>	041 505 0219	041 002 0002	079 480 585	joan@mandelametro.gov.za	

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ATTENDANCE REGISTER / COMMUNICATION SCHEDULE									
No.	Titel	Name	Surname	Role / Job Title / Staff	Tel	Fax	Cell	E-mail	Signature
Stenom									
1	Mr	Pau	De Chie	Stenom	011 870 6560	011 870 6560	011 870 6560	paudechie@stenom.co.za	
2	Ms	Nicola	Verber					nicola@stenom.co.za	
3	Mr	Dani	Wibon	Facsim				dani@stenom.co.za	
4	Ms	Bernadette	Solomon	Facsim				bernadette@stenom.co.za	
5	Ms	Linda	Mkandawane	Facsim	011 870 6560		011 870 6560	linda@stenom.co.za	
Other									
	Mr	Carol	V. Dyhl	Eng: Transmission	061 312 6356	061 312 6262	079 840 0012	cvdyhl@mandelametro.gov.za	

106730/MIN/Other Meetings/013-Special Meeting_Elec Services Mtg No 1_Minutes_20120222.doc

SUMMARY OF THE GEOTECHNICAL INVESTIGATION STUDY FOR PROPOSED PORT ELIZABETH SUBSTATION (NEW ESKOM's TX SUBSTATION)

This is the summary of the recommendations of the Desktop and Preliminary Geotechnical assessment reports:

Substation Requirements

The minimum dimensions of the site Eskom require for the proposed installation is 600m x 600m. The size of the site should allow for flexibility of the orientation of the substation footprint, cost effective optimization of the platform design and construction, configuration of power lines and pylons, future extensions, construction of access roads for abnormal loads, oil dams, storm-water drainage, and probably storage transformer bays and storage yards.

Since the long-term continuous operation of this electrical installation is of national interest, the site should not be subject to any geohazards, such as seismic events, wash away of embankments in natural drainage paths and flooding below the 1:100 flood lines. The cross sectional slopes of the site should not exceed 1,3%.

Considering the present preliminary electrical design of the substation, the construction dimensions would likely be of the order of 400m x 280m with the allowance and inclusion of side slopes for embankments, service roads, security fences etc. In addition, ample space is required for geometric design and construction of road-access, for abnormal traffic loads and additional structures as mentioned above.

Desktop studies

The desktop study is a very important phase, during site selection studies.

All available Geotechnical information is collected and use is made of *Topographical Maps*, *Geological Maps*, available geotechnical reports and *stereo Aerial Photographic studies*.

Aerial Photographic Interpretation

In principle the following features are being studied, information being obtained and interpreted when studying stereo aerial photos

- Reflection of the action of nature in creating the existing conditions
- Grouping of materials according to certain patterns
- Definition of various boundaries and linear features of significance
- Field checking by visual inspection

Stereo photo -interpretation has a great advantage over interpretation of a single photograph, because it is better able to identify topographical and erosion features, grey tones, and textures have greater requisite clarity contrasts. Basically, two aspects of the air photo image are revealed in the stereo-model of a given area, and these are **surface form and grey tone**, which could be subdivided as:

- a) Elements of Surface Form:
 - Topographic form
 - Drainage form
 - Erosion form
- b) Elements of Grey Tone and Texture of:
 - vegetation
 - due to land use
 - soil and rock material

Geotechnical information obtained in this way was correlated with Topographical and Geological Map data.

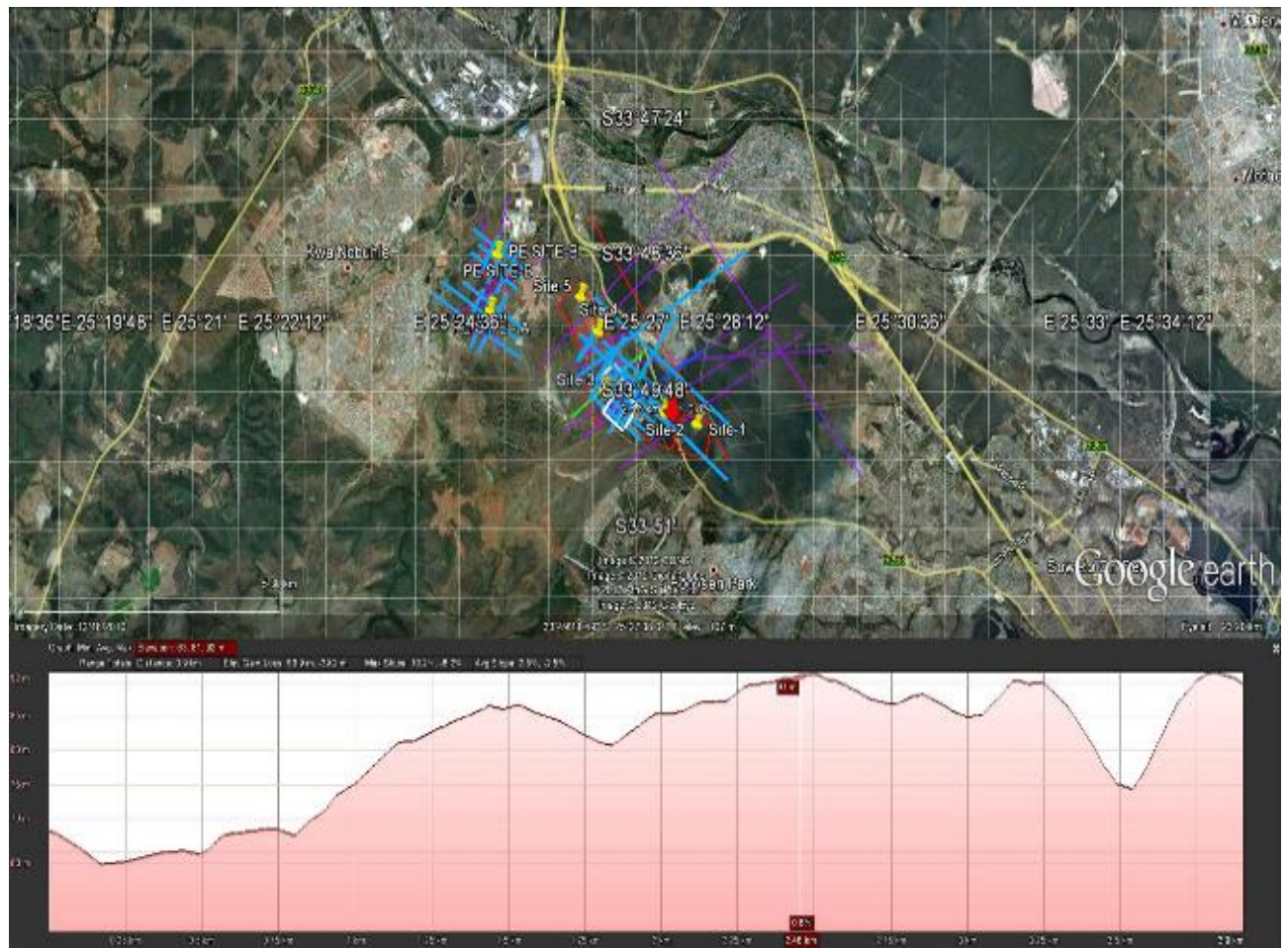
Investigation of the Area in the Surrounds of the Existing San Souci Substation

Having followed the desktop study process explained above the following information was obtained:

The area is subject to storm-water runoff from a catchment area immediately to the north east, with steep slopes of the order of -3,5 & to -7%. The topography in the surrounds of the substation could be described as hilly with a strong emphasis on hillocks and highly undulating with steep slopes. The variable pattern of the formation of valleys and hillocks is a prominent feature of the topography of the area. As a result of the storm water runoff from the catchment area, clear indications are present of drainage paths during rain storms and soil erosion. In principle drainage paths are avoided with the construction of large platforms, since disturbance of these drainage paths could end up hazardous. Further down the slope, south west of the substation, clear indications are present of flood lines which should be avoided with site selection.

The San Souci substation, with dimensions of approximately **125m x 150m** is located on a hillock (a high), with declining slopes of the order of -2% to -8% immediately to the North West and -2% to -3,5% to the South East, over a distance of approximately 200m to 300m where the drainage paths from the North East are intersected. The area immediately to the south of the substation is confined with drainage paths to the South East, North West and South.

After an in-depth study of the area in the surrounds of the Sa Souci substation it is evident that the topography and drainage conditions are not favorable for the locality of a site of 600m x 600m. In contrast, the preferred Site-B is not subject to any hazard as discussed. The topography is considered suitable for the cost effective construction of the platform, with maximum cross-sectional slopes of less than 1%.



INDICATION OF CROSSECTIONAL TOPOGRAPHY SURROUNDING SAN SOUCI SUBSTATION

From information obtained during the Geotechnical studies, the topography of Study Area B” is considered suitable to provide flexibility for substation orientation as well as options to optimise earthworks design. A substation platform within this area will be considerably less costly to develop than Study Area “A”. The need to import suitable material for the construction of the platform will be highly reduced.

SEQUENCE OF THE EVENTS OF THE CONSULTATION OF NELSON MANDELA BAY METROPOLITAN MUNICIPALITY (NMBMM) BY ESKOM AND SiVEST (Eskom's appointed Environmental Assessment Practitioner / Environmental Consultant in terms of NEMA Regulations of 2006) IN CONNECTION WITH NUCLEAR THYSPUNT TRANSMISSION LINES INTEGRATION PROJECT (NUCLEAR TTLIP)

The Nuclear TTLIP was brought to NMBMM attention since its (the project's) inception. The sequences of events are as follows:

- i) SiVEST's Project Manager attended the meeting with NMBMM at Port Elizabeth on behalf of Eskom on 17 October 2008. The proposed Nuclear TTLIP was discussed and the location of the proposed Transmission (Tx) substation then, was proposed to be at Blue Horizon Bay after it was indicated to Eskom and SiVEST during the Focus Group Meeting held during September with NMBMM representatives that the initial location north-east of Port Elizabeth, near the suburb of Gelvandale and adjacent to the Van der Kamps Kloof Nature Reserve was not in line with the NMBMM's Spatial Development Framework. The location of the substation at Blue Horizon Bay was also ruled out through the consultation process by NMBMM because of its unsuitability and falling within a proposed nature reserve.
- ii) On 23 March 2009, meeting was held with the NMBMM's representatives from Directorates / Sub-Directorates: Electricity & Energy and Environmental Management. The new identified location area, namely Fitches' Corner, for substations was communicated to NMBMM's representatives.

NMBMM indicated that in principle, they do not have any problem with the identified site and recommended site at Fitches' Corner for Tx substation. Eskom was further informed by NMBMM that a new substation will need to be built to service future NMBMM's load demand. It is preferred to have NMBMM proposed new substation next to Eskom's substation. These substations have to be positioned back-to-back.

However, a concern was raised by NMBMM that if Fitches' Corner is submitted to the Department of Environmental Affairs (DEA) for Tx substation's application and an Environmental Authorisation is granted prior to the NMBMM conducting their EIA for their substation and associated distribution power lines, and NMBMM's EIA indicate that NMBMM cannot construct the substation and its lines, then the NMBMM will have a problem.

Furthermore, SiVEST mentioned that through public participation process, especially after consulting the landowners at the proposed Fitches' Corner Tx substation's site, a question was raised by Fitches' Corner landowners that if power supply is required to the eastern and south-eastern area of the NMBMM, is it not more realistic that the proposed Tx substation site be closer to where the demand is, and not Fitches' Corner as this will be too costly for NMBMM and will require longer distribution lines to the areas where the power demand is needed?

NMBMM then suggested that the Nuclear TTLIP be put on hold until such time that NMBMM has undertaken and concluded their Metro's spatial planning matters. In response, Eskom indicated that the project cannot be placed on hold since the project is included in the Eskom's Transmission Development Plan (TDP) 2010-2019.

NMBMM then recommended an area nearer to Uitenhage Industrial Site (to be referred to in this letter as "Uitenhage Node / Jachtlakte Substations Site") as an alternative area to Eskom and SiVEST. It was agreed that Fitches' Corner will still form part of the EIA as an alternative. The Final Scoping Report for Eskom's Nuclear TTLIP was then submitted to DEA with the recommendations of the two areas (i.e. Fitches' Corner and Uitenhage Node / Jachtlakte Substations Site) for the positioning of Eskom's Tx substation.

Please note that:

Uitenhage Node / Jachtlakte Substations Site was identified as a wider study area by both NMBMM and Eskom for their proposed locations of the newly proposed substations, and not specific site footprint.

- iii) On 15 October 2009, meeting was held with the NMBMM's representatives from Directorates / Sub-Directorates: Electricity & Energy and Environmental Management as a follow-up meeting of the 23rd of March 2009 regarding the proposed alternative substations locations. NMBMM was informed that the EIA phase is anticipated to commence soon, as DEA's acceptance of the Final Scoping Report and the approval of the EIA Plan of Study is expected within days.

As a way forward NMBMM agreed that before the proposed Jachtlakte Substations Site could be confirmed as the preferred site area than Fitches' Corner, NMBMM firstly need to undertake a baseline study to assess the feasibility of running 3x132kV distribution lines south from and 2x132kV distribution lines north from the Uitenhage Node / Jachtlakte Substations Site to certify that there will not be any environmental constraints / fatal flaws later when NMBMM undertake the EIA process for their substation and the associated infrastructures (i.e. 132kV power lines).

Eskom supported the appointment of SiVEST by the NMBMM to conduct a study which was called ***"NMBMM's Environmental Fatal Flaw Analysis for the Proposed Location of 132kV Lines and Substation – Uitenhage Nodal Substation"*** (Refer to Annexure "C" - Letter from Eskom to NMBMM dated 8 December 2009).

SiVEST therefore conducted the study for NMBMM and the study was completed towards the end of 2010. No environmental fatal flaws were found in the area. Furthermore, the study recommended a preferred site within the studied area for NMBMM to focus on when they resolve to undertake the EIA process for their new substation. NMBMM agreed for this study report to be used in the EIA phase

of Nuclear TTLIP. Eskom's geotechnical specialist was provided with this report to commence with his geotechnical investigation studies to identify suitable sites locations on which Eskom's proposed Tx substation in terms of the Nuclear TTLIP could be placed.

- iv) On 8 & 28 March 2011, meetings were held with the NMBMM's representatives from Directorates / Sub-Directorates: Electricity & Energy and Environmental Management as part of follow-ups consultation meetings regarding Eskom's Nuclear TTLIP in terms of the EIA process. One of the objectives of the meeting was to identify / indicate possible specific site location(s) for the geotechnical investigation studies to take place since the assessments of both the corridors and that of the wider study area (Uitenhage Node / Jachtylakte Substations Site) were completed.

Furthermore it was to get clarity about the additional information that NMBMM required as supportive document to the Land Owner Consent Form that NMBMM, as a landowner has to complete to allow Eskom to undertake the geotechnical assessment studies. The geotechnical assessment study is an important aspect in recommending where it is feasible (i.e. technically and economically) and safe to build a substation.

During these meetings, NMBMM mentioned for the first time their integrated future planned infrastructures (i.e. Stanford Road & the MR448, Uitenhage LSDF, etc.) and the concern of their plans being affected by the proposed corridors and Tx substation. SiVEST committed to assess the newly supplied information and to incorporate the outcomes of the assessment in the draft EIRs which were being finalised at the time, for public review period.

- v) Eskom was informed of the existing San Souci substation by e-mail on 30 March 2011. The suggestion from NMBMM of locating the Eskom's Tx substation next to San Souci substation was forwarded / copied to Eskom's geotechnical specialist to be assessed together with the wider study area (Uitenhage Node / Jachtylakte Substations Site).
- vi) During July 2011, NMBMM was informed of the placing of the draft EIRs for public review. The NMBMM representatives attended a key-stakeholder workshop meeting held between 25 July and 5 August 2011 whereby presentation was done regarding the outcomes of the EIA process for the TTLIP. The commenting period ended on 30 September 2011. NMBMM requested an extension to this commenting period and they were granted an extension to 1 November 2011. A site visit was also conducted with NMBMM representatives on 18 October 2011. Comments were then received from NMBMM under the cover letters from the Public Health dated 03 November 2011 and Human Settlement dated 07 November 2011.
- vii) Meeting was held with NMBMM at Aurecon's Office in Port Elizabeth on 24 February 2012 (minutes thereof could be provided on request).

Lerato Mokgwatlheng

From: Joyce Mashiteng
Sent: 08 December 2009 04:24 PM
To: Carel van Dyk
Cc: Lerato Mokgwatlheng
Subject: Re: Fwd: NMBM Substation EIA
Attachments: 20091208151320708.pdf

Carel,

Please find the attached as per the request.

Regards

Joyce M. Mashiteng
Programme Manager
Eskom Transmission
Land and Rights

Tel 011 800 4623
Fax 086 663 3041
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Email:joyce.mashiteng@eskom.co.za

>>> "Carel van Dyk" <cvdyk@mandelametro.gov.za> 2009/12/04 10:06 AM

>>> >>>

Hi Joyce

Can you please advise when I can expect the letter from you.

Thanks

Carel van Dyk
Graduate Electrical Engineer (Transmission Division) NMBMM Electricity and Energy Directorate Tel. (041) 392-4356
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NMBMM Electricity and Energy Directorate
PORT ELIZABETH

Date: 8 December 2009

Enquiries: L. Mokgwatlheng
Tel +27 11 800 6812

Attention: Mr Van Dyk

Dear Mr Van Dyk

RECOMMENDATION FOR WORK TO BE CONDUCTED BY SIVEST FOR THE NELSON MANDELA BAY METROPOLITAN MUNICIPALITY'S ENVIRONMENTAL FATAL FLAW ANALYSIS FOR THE PROPOSED LOCATION OF 132KV LINES AND SUBSTATION (UITENHAGE NODAL SUBSTATION)

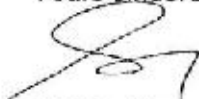
The request from SiVEST dated 18 November 2009 on behalf of Nelson Mandela Bay Metropolitan Municipality (NMBMM) and the correspondence between NMBMM and Eskom by telephone and e-mail on 01 December 2009 has reference.

Eskom confirms that it has no objection to the appointment of SiVEST to carry out the NMBMM's environmental fatal flaw analysis for the proposed location of 132kV lines and substation (Uitenhage Nodal Substation) hereinafter referred to as the Uitenhage Nodal Substation environmental fatal flaw analysis. Eskom is of the view that it is a well-advised decision to appoint SiVEST for the above mentioned work since they are undertaking the EIA Thyspunt Transmission Lines Integration (TTLI) on their behalf and this will enable SiVEST to filter through the outcomes of the Uitenhage Nodal Substation's analysis into the TTLI EIA project which has already commenced.

We advise that the Uitenhage Nodal Substation environmental fatal flaw analysis to be conducted by SiVEST for the NMBMM's cannot be undertaken under the ambit of Eskom Holdings (Pty) Ltd's existing contract with SiVEST (Contract Number: 4500066046) for the Environmental Impact Assessment for the Thyspunt Transmission Lines Integration Project. In the circumstances, NMBMM must enter into a separate agreement with SiVEST to conduct the work which it will pay for in terms of their agreement.

We look forward to co-operating with you in respect of our mutual projects.

Yours sincerely



MJ Mashiteng
Transmission, Land and Rights
Programme Manager

Transmission, Land and Rights
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