

Comments and responses report – The proposed Maningi Substation

Notes:

- This comments and responses report contains all correspondence issued during the public participation process. Copies of actual correspondence are appended in Appendix E8.
- “OD” refers to objection document submitted by various interested and affected parties.

Item	Name	Specific issue / impact	Comment	Response
	I Lazarides	Registration	-	-
	J Forman		-	-
	D Travlos		-	-
	G Lapedus		-	-
	J Warsop		-	-
	K Ho		-	-
	B Broskie		-	-
	W Friedland		-	-
	D Zasas		-	-
	R Zasas		-	-
	Y Ambar		-	-
	T Ambar		-	-
	A Kazantzias		-	-
	I Kalisa		-	-
1	A Monastursky	General	I would like to object to the proposed substation in Sandown ext 24.	Noted
2	L Berman		I object to the substation	Noted
3	A Forman		Following receipt of your minutes of the Maningi Substation, Sandown Extension 24 minutes, as Chairman of Stratford Estates, situated on Corner of Helen and North Road and representing 28 Residents of Stratford Estate, we are lodging our objection to the proposed Substation location.	Noted
4	OD		We the residents of Sandown 24 vehemently oppose the construction of the substation by Eskom on Erf 304, or elsewhere in Sandown 24. From the above, it is clear that our objections to the erection of this substation are not unsubstantiated due to the health hazards, noise factors, environmental issues, potential for damage to properties, not to mention the negative impact on the value of our properties in the area. We contest that the upgrade of Eskom's infrastructure is to supply Sandown 24 as was stated in the public participation meeting on 21 May 2008, but rather that Eskom is required to provide electricity to the increased density (40 storey buildings) which will be allowed within the 400 meter radius of the Gautrain stations as mentioned above. We wish to advise that our area is a residential area, where families are residing, with children and we pride ourselves on the fact that the residents of the area have all looked after and invested in their properties. We will not allow Eskom to destroy our homes, our health or our investments. On purchasing our properties in Sandown 24, it was on the understanding that it was purely a residential area. We have also spent large amounts of money securing our homes and obtaining the services of a professional security company. We will not allow our area to become an “industrial” area to accommodate Eskom who failed to take into account any of our constitutional rights on	Noted

			purchasing Erf 304 purely for the purpose of erecting a substation. Accordingly, we will object at every juncture to the development of the Maningi Substation.	
5	OD		Explain in detail and provide maps to show what areas the substation will supply when it has been built. Is the electricity going to be supplied to Sandown 24 exclusively, and if so, what is the current shortfall in electricity supply for the area given that the density in the area is Residential 2, which is the defined density in the Regional Spatial Development Framework document (which is the de facto plan for development in Gauteng). What proportion of the electricity from Maningi will be used for Sandown 24 and what proportion outside the area and where? Explain and provide evidence why Adolf Street is the only location which can be used to supply the said areas outside Sandown 24. Has the open land on Daisy Street which is owned by Joburg Council been evaluated as an alternative – the zoning here is Res 3 already– more in line with the substation. Has Innesfree Park been considered as an alternative? "	
6	M Brauer	Location and site selection	The substation can be better located in nearby but less densely populated suburban residential areas. Eg. close to open areas alongside the M1 or on the open space next to Innesfree Park	The area of the site was specifically selected specifically because of its increasing residential density and proximity to the load centre as is international best practice. Locating the substation away from the load centre will pose significant cost and efficiency constraints.
7	A Mantle		Eskom justify the choice of this location because it will be equidistant from the existing smaller Benmore and Atholl substations; this is not acceptable as Eskom are not transporting a bulk physical product, but electricity transmitted by means of electrical infrastructure. The substation can therefore be located away from the point of delivery with a relative increase in investment costs. The substation can be better located in non-developed areas to the North of the Morningside clinic or alternatively close to open areas alongside the M1 or within Innesfree Park. Also, why has this Eskom project not been integrated within the Gautrain structures currently being excavated.	The area of the site was specifically selected specifically because of its increasing residential density and proximity to the load centre as is international best practice. Locating the substation away from the load centre will pose significant cost and efficiency constraints. The Maningi substation will not supply the Gautrain.
8	J Mcgee		Should not be located within a residential area. It should be placed in Innesfree Park, or Wynberg industrial area	Locating the substation away from the load centre will pose significant cost and efficiency constraints.
9	K Suchard		I live in a complex on the corner of Helen & North road - "Stratford Estate" which is about 150 meters from where this project is proposed. I surely hope that the necessary steps will be taken to move this project to a more suitable site. I am in total disbelief that Eskom can set this up in a vastly dense populated area. I am convinced that all the homes around & the new developments going up across the road from this site are all unaware of this proposed sub station. Every home in this area should be advised. This will definitely affect the value of all homes in the area. Surely Eskom should rather consider building this project in Innesfree park which is on the other side of the Grayston bridge which is an open area!	A public participation process including extensive advertising and notification of the proposal was undertaken in the area. Refer below for response regarding property devaluation.
10	L Lipchick		I fail to see the necessity of the location being in the centre of a residential area. There are many options in the vicinity where the substation will not disturb residents.	The area of the site was specifically selected specifically because of its increasing residential density and proximity to the load centre as is international best practice. Locating the substation away from the load centre will pose significant cost and efficiency constraints.
11	I Harrison		At the meeting I requested that we need to be convinced that such a substation would be approved in any first world country. I had suggested that we be shown real examples where residents have approved and live happily with a substation of this nature on their doorsteps. It is one thing for people to build close to existing substations when they are fully aware of the substation, but it is a completely different issue when we are about to have one plonked in between our homes that were purchased without any prior knowledge of such plans. Could you please reflect my suggestion in the minutes and also note that no one was able to tell me at the meeting whether such a substation exists in an American or European suburb.	Noted. Although no case studies have been provided by Eskom, there are several examples of substations which have been constructed in densely populated areas throughout the world.

12	G Katz		Surely it can be located in an area closer to industrial businesses eg Eastgate Ext	Refer above
13	W Friedland		A much more suitable place for the substation would be the Eastern Boundary of Adrienne Street, Sandown Ext. 24. These houses are bordered by a river on the back, a veld of pylons in the front, and have pylons running along the side of their houses. Resistance to a substation from these few houses would be minimal, and a lot easier to get passed.	This was Eskom's initial choice in order to avoid buying a residential property. However, the overhead line on this property belongs to City Power and they were not in favour of the idea since they plan to upgrade the line to a higher capacity. An Eskom substation under their line will not make it possible, and Eskom also realised that it would not be feasible. It must be understood that Eskom and City Power are competing electricity utilities.
14	OD		Is the position in between private properties/homes considered the most desirable position for this facility and if so, why? How does this compromise accessibility to the facility for lines into and out of the substation?	The site was not selected based on its position between homes, rather its position within the load centre. Accessibility to the transmission lines will not be compromised based on the position of the substation in a residential area.
15	OD		The fact that Sandown Ext 24 may be halfway between Athol and Benmore substations is not contested. However we require a detailed description to show the basis on which the proposed substation position being moved from the originally proposed position on Erf 360 Sandown Ext 24 (which is apparently owned by City Power) to Erf 304. Provide a detailed explanation of the rationale for changing the proposed location to ERF 304 and why this is better suited to construction of the substation than Erf 360, especially in light of the fact that the overhead power lines are already in place at Erf 360 where the infrastructure to bring power in and take it away again will need to be built at Erf 304 – at extensive additional cost and impact on the residents of the area.	This was Eskom's initial choice in order to avoid buying a residential property. However, the overhead line on this property belongs to City Power and they were not in favour of the idea since they plan to upgrade the line to a higher capacity. An Eskom substation under their line will not make it possible, and Eskom also realised that it would not be feasible. It must be understood that Eskom and City Power are competing electricity utilities.
16	OD		Give reasons why City Power vetoed the construction of the substation at Erf 360. What is the saving which Eskom will derive from building the station at Erf 304 rather than raising the power pylons at Erf 360 to build these on land already owned by City power / Eskom? Provide detailed evidence that this option has been fully analysed, including raising the pylons.	Refer above
17	OD		The site selection process is not transparent. A process of selecting the site is alluded to in the BID, but specific information is required. This will be required to be detailed in the (Basic Assessment Report ("BAR"), as an application for exemption from assessing alternatives will be required to be provided. This information is critical to the residents, as no real rationale has been provided as to why this site is the ONLY possible site. Also, the situation is worsened as Eskom made the decision to purchase a single property "at risk" for the placement of the facility. A real need and justification for the project is requested.	Erf 304 is currently the only site owned by Eskom for which the EIA has been undertaken and in terms of which no alternative site is presented. Alternatives may be rated in terms of site, activity or technology alternatives. The Maningi impact assessment undertaken in the BAR is for alternative mitigating technologies in order to minimize the potential impact of the substation on the environment to within acceptable limits.
18	OD		If City Power vetoed the construction of the substation below its power lines, what were their reasons. Give full disclosure of the risks determined by City Power, and explain in detail why these same risks do not apply to constructing the same substation in the immediate vicinity of residential houses, many of which are occupied by children younger than 6 years of age.	Refer above.
19	OD		Erf 360 Sandown 24 was proposed for construction of a same substation in 2004 which residents objected to. Was an EIA conducted for this proposal and if so, what were the detailed findings of the EIA? What are the reasons that this site was abandoned for the development in favour of Erf 304 Sandown. It is stated for the record that the same objections are applicable to Erf 360 and we specifically request that all the objections lodged on Erf 360 be incorporated herein.	We are not aware of an EIA which has been conducted Erf 360 as this is a separate site by a separate utility.
20	OD		Provide a detailed explanation of the reasons for purchasing the property before doing the EIA; and why the rezoning has been left until last. Should the EIA fail, what does Eskom propose to do with the property and how will it be maintained? We have confirmation that Erf 304 was registered in Eskom Holdings Limited's name on 13 September 2007. The residents require a full explanation as to why Eskom chose to delay advising the residents of the	Developer's buy the land they wish to develop before they go to the expense of doing an EIA. No developer is required to advertise the fact that they are buying a property with the intention to develop the property. Eskom approached reputable estate agents operating in the area to find a property. Accordingly the EIA process was initiated and advertised as allowed by the project schedule. Should

			purchase of the property and proposed substation for the past seven months.	no environmental authorization be provided for the construction of the substation on Erf 304, an alternative site in the Sandown Extension 24 area must be acquired, not excluding consideration of other residential sites.
21	OD		What alternative locations have been proposed for the substation and why is Erf 304 considered the better option for this development than the other proposed sites in terms of location, costs to Eskom, health and environmental issues? Provide detailed comments and evidence to substantiate response. What other alternative locations are being subjected to an EIA for the construction of Maningi?	No alternative locations have been assessed in terms of the potential environmental impact. Refer to Item 17.
22	OD		To conclude our comments relating to the site selection process as stated herein above, we wish to record that we are opposed to Erf 304 being utilised to construct a substation as detailed above. We furthermore reserve all of our rights to proceed against Eskom in the appropriate forum for any damages, actual or potential, that we, the residents of Sandown 24, may suffer through the erection of the Maningi substation on Erf 304. We, the residents are furthermore of the opinion that Eskom has not acted in a transparent manner with the residents in the area by purchasing Erf 304 and then attempting to present the residents of Sandown 2 with a fait accompli. We are also of the opinion that the rationale for the site selection has not been adequately addressed, neither have alternative sites been disclosed to us, despite repeated requests at the public meeting on 21 May 2008. We will not tolerate this type of "bulldozing" by Eskom or any of its representatives in this matter. We will take this matter to the Constitutional Court of South Africa if needs be.	Noted
23	J Karunaratne	Property devaluation	I am the owner of 305 Adolf Street and I am currently overseas. I am emailing this form to register myself as an affected party, before the 22nd of May as indicated on the form. Needless to say, I am greatly perturbed & traumatised that this is all happening and very disappointed at the way the process has taken place. I plead to the people of Eskom to please seriously consider the plight of my family and myself if a sub-station were to be built and hope that they will understand the humane & financial impact that I would face, and thus withdraw the proposal. I am also copying Mr. Tinus van Vuuren at Eskom, whom I after great difficulty found out was 'in charge of this proposal' and who assured me in 2007 that I had nothing to worry about. I believe that I have made sufficient comments in the attached document for you to understand why I unfortunately and with deep regret, oppose the building of a sub-station at 304 Adolf Street, the property adjacent to mine.	Noted. The EIA will be submitted to the relevant authority for consideration in order to make an informed decision on the proposal. Corresponding documents attached in Appendix E8.
24	A Mantle		The substation is located in the heart of an established upmarket residential area It will have a depreciating effect on all the property values of the surrounding houses and these suburbs	The design and construction of the substation in accordance with the full spectrum of visual, noise and safety design mitigation measures will serve to mitigate the potential environmental impacts identified during the public participation process. Upon full realization of such mitigation measures, the construction of the substation is not anticipated to result in the depreciation of adjacent properties during operation. Refer to independent evaluation assessments in Appendix D4 and D5.
25	L Aronson		The substation is being located in the heart of an established upmarket residential area and this will have an enormous depreciation effect on all the property values of the surrounding houses, clusters and apartments in the area.	
26	G Katz		Being located in an established upmarket suburb it will affect the property values.	
27	J Park		I was unable to attend the meeting last evening but am very perturbed at the proposed substation in our area and would strongly protest this. Not only will it bring down the value of property in this area but the health issues are great. I am against this substation for health and environmental reasons as well as the devaluation of my property 6 houses away. There seems to have been no consultation with the residents until late May. This is an outrage and I agree with all the other residents vehemently opposed.	
28	A Forman		We strongly oppose such a project given the concerns and no consideration has been given to property values in close proximity.	

29	B Stonefield		I am currently the owner of Unit 14, Stratford Estate and have been forwarded the minutes of the public meeting held regarding the proposed Substation dated 21 May 2008. The minutes were forwarded to me by Mr Mantle of Unit 24. I wish to put on record that I strongly oppose the construction of the substation for all the issues raised in the minutes of the meeting. There are huge safety concerns and the substation will seriously affect the value of our complex. I trust that all will be done to build the substation at a more suitable venue/site.	
30	OD		How will Eskom prevent the substation from being an eyesore and having a negative impact on the value of properties in Sandown 24. The Eskom substation in Ivy Road in Norwood has had graffiti painted on its walls which has never been removed, provide evidence that Eskom will maintain the property and how it will avoid this becoming an eyesore. Provide a schedule showing the frequency of maintenance related to the visual impact of Maningi; detailing what will be maintained, how often and by whom.	It is a recommendation of the EIA that Eskom prepare a site-specific maintenance schedule must be prepared by Eskom specifying maintenance actions for components, façade and landscaping.
31	OD		The substation will have a significant negative impact on the property values of existing houses in Sandown Ext 24. In addition to ensuring that Erf 304 is not a health hazard, an environmental hazard; as well as aesthetically pleasing on the eye, how does Eskom propose to compensate residents of the Sandown 24 for this development should it go ahead, which we as the residents reiterate should under no circumstances be allowed to go ahead on Erf 304? In the event that the development is ultimately forced upon the residents, further consultation, at the behest of the residents, will be required to compensate the residents for the inconvenience and loss of value to their properties.	No substantive negative impact on property prices is anticipated based on the property evaluation reports upon implementation of the range of environmental mitigation measures.
32	OD		In order to independently evaluate the expected impact of such a development on property valuations in Sandown 24, Eskom is required to conduct a survey of at least six estate agents active in Sandown 24. Based on their intimate knowledge of the area, the survey will provide evidence of how property values are likely to be impacted by such a development. Complete findings are to be communicated to all residents. Active estate agents in the area include Gloria Estates; Pam Golding; Jawitz; Chas Everitt and Eltec. In addition, Eskom will also be required to cover the costs of an independent valuator, nominated by the residents of Sandown 24 to evaluate their properties prior to and after construction of the proposed substation to quantify the impact on the value of properties in the area.	Eskom has taken reasonable measures to quantify the potential impact on adjacent properties. Refer to independent evaluation reports attached as Appendix D4 and D5.
33	OD		We require a detailed description and evidence that the construction of substations by Eskom in other residential areas has not had a detrimental impact on: a. Aesthetics and character of the neighbourhood b. Market value of surrounding and closely located properties, substantiated by c property economist's view of whether the impact was related to trends in the broader property market or local factors d. Security of the residents of the area e. Health of the residents including adults and children	Eskom has taken reasonable measures to quantify the potential impact on adjacent properties. Refer to independent evaluation reports attached as Appendix D4 and D5.
34	E Niedermayr & R Niedermayr	Health	We are most concerned about the magnetic field that is emitted by such transformers. They affect the health of the people living in the surrounding area. It should not be built in the middle of a residential area. How about in the field next to the road or next to Grayston Shopping Centre which is a more commercial area or by the fire station which should be more secure, Also there are two schools situated closeby.	Eskom will fully enclose the substation components within a roofed residential façade serving to attenuate all EMF which are not considered to be of any major significance in this case. All transmission cables connecting to the substation will be positioned underground. EMF outfall is normally associated with exposed overhead transmission cables, where data on the potential health effects thereof is inconclusive. Refer to specialist risk assessment undertaken in Appendix D3.
35	C Aston		Health risks in respect of such apparatus having carcinogen effects	
36	L Aronson		It is a health hazard and people are at risk of getting cancer especially childhood leukaemia, and there are two schools in North Road!!!!!! In the suburb of Victory park, Johannesburg, where there are pylons, it has been found that there has been an increase of cancer cases. Please read attached article, which I am faxing separately.	

37	K Suchard		The impact of this substation could be very dangerous, besides the enormous health hazard. It is a known fact that the electric current is linked to cancer.	
38	A Froman		Health issues and proven facts in the USA and Canada regarding the building of residential homes near a substation and the lines.	
39	OD		Have the potential negative impacts of electromagnetic radiation associated with a substation of this nature been taken into consideration, especially in the context that Grayston Preparatory School is located less than 200 meters away from the proposed site? There are also a number of households in the immediate vicinity with young children	
40	OD		Provide detailed evidence that the risks on the health of adult residents – adult cancers; neurodegenerative diseases; miscarriage and others – have been fully evaluated and mitigated. Eskom is required to investigate the potential impact on increased insurance premiums of residents in the area by obtaining quotations from three life term insurance companies and medical aid companies.	It is not known that health insurance premiums increase based on proximity to substations.
41	A Mantle	Safety	There are risks of fire, explosions and oil spills	The risk of fire and explosions which may lead to catastrophic failure will be mitigated through superior active fire protection systems. Oil spills from ruptured transformers will be contained in holding dams constructed according to specific thresholds and standards. Refer to specialist report in Appendix D2.
42	C Aston		Hazardous risks such as fire, explosion and oil spills	
43	L Aronson		There are risks of fire, explosions and oil spills	
44	A Forman		We do not feel that Eskom have appropriately considered alternate locations which are not in close proximity to residential homes and are also of the view feel that “the point of delivery” argument is not valid. Health and safety should overrule cost factors.	
45	K Suchard		The potential risk of fire from any oil leaks which may occur.	
46	OD		Lighting mast – describe in detail the physical appearance of this mast and detail the impact that it will have on the adjacent properties during lightning storms. The area is built on a granite ridge and is one of the areas in the world which is most frequently struck by lightning. Granite is a poor electricity conductor and when lightning strikes a mast which is installed at one site, the current travels to ground and hits elsewhere. In light of this fact, demonstrate to the residents of the area that the lightning mast will not change the lightning patterns in any way that will cause increased risk and damage to the neighbouring properties. Provide detailed and tangible evidence to this effect. Eskom is required to investigate the potential impact on increased insurance premiums of residents in the area by obtaining quotations from three short term insurance companies.	The Maningi sub station will be provided with the necessary lightning conductors and arrestors since the incidence of lightning on the Highveld region is very high. Refer to specialist Fire Risk Assessment appended as Appendix D2.
47	OD		Security - Give full details of the number of people who will be coming into and out of the neighbourhood on a daily basis to work at the substation (both during and after construction), and provide evidence of how the access of these employees to the area will be monitored. We wish to advise Eskom that this will pose a serious security threat to the residents or Sandown 24 and that Eskom employees will be required to carry Eskom identification at all times.	Eskom needs to undertake a tendering process in order to identify the contractor for the construction phase. There is currently no indication of the anticipated staff component. Eskom will undertake the necessary access and safety control measures in terms of the Environmental Management Plan
48			Mitigation of chemical and oil spills contained in transformers. Describe in detail the measures which Eskom proposes to mitigate this risk. Give a detailed procedure and process for the disaster management plan and what it will cover. Which areas on the site would be bounded, if any? What chemicals and oils will be used, and show that Eskom has fully evaluated the impacts and risks associated with using these chemicals and oils, from the perspective of fire hazards, toxic gas emissions in case of fires; greenhouse gases emitted in case of fires; potential impact of arcing on the chemicals and oils? What other first world countries are using these same chemicals and oils in their electricity substations constructed after 2006 (provide references of best practice case studies with sources). How would impacts from a spill be mitigated?	It is a recommendation of the EIA that a site specific disaster management plan be compiled and presented to stakeholders and affected parties. All mitigation measures for the containment of oils and chemicals are presented in the Environmental Management Plan.
49			"Mitigation of potential fire risk – we have all seen a lot of press coverage of fires and near deaths as Eskom substations in the past months. How will Eskom	It is a recommendation of the Fire specialist and the EIA that Eskom implement active fire protection systems at Maningi, effectively

			mitigate this risk! Describe in detail the measures which Eskom proposes to mitigate this risk. Provide a schedule of the maintenance programme to be implemented once substation is fully operational. There is an abundance of evidence that across South Africa Eskom has not maintained its substations to the required standards with the results of fires, including Kempton Park (media coverage will be made available to Eskom and its representatives on request). We require a commitment that this will not occur in Sandown 24 and the definition of financial penalties to benefit impacted residents in the event of fires – we require Eskom to take up an insurance policy to benefit the residents of Sandown 24 for any damage or costs incurred as a result of fires at the substation. Provide detailed evidence of the gases produced in case of fires; full disclosure of the health impacts of inhaling these gases and the impact of such gases in terms of climate change and greenhouse impacts as well as their effect on the ozone layer and risk of acid rain. "	ensuring that the substation may be insured as a Highly Protected Risk (HPR). Such properties are judged to be subject to a much lower than normal probability of loss by virtue of low hazard occupancy or property type, superior construction, special fire protection equipment and procedures, and management commitment to loss prevention. Refer to Appendix D2.
50			Describe in detail the measures which Eskom proposes to mitigate heat impacts. Provide a schedule of the levels heat which will be emitted from the substation and how this will be managed within the given limits. Provide details of the permissible levels of heat emission in terms of South African environmental laws.	Waste heat emissions from the operation of the transformers will be concentrated to within the facility and will not permeate outside of the containment structure. More efficient transformers tend to have a lower temperature rise, while less efficient units tend to have a higher temperature rise. Increased temperature is a major cause of reduced transformer life. If operated efficiently, waste heat is considered to be a negligible impact. In the event of catastrophic failure or fire an active fire protection system will ensure that the threat of fire is eliminated immediately.
51	A Mantle	Visual	It will appear as a fortress type 2-3 storey building projecting above the surrounding houses, an eyesore visible to all the homes in this area	The residential façade will be approximately two storeys in height, designed to have the appearance of a residential dwelling. The best practical measures will be taken by Eskom to minimise the visual impact of the security measures taken to secure the facility. The residential façade will serve to create the impression of a residence as far as possible.
52	L Aronson		It will appear as a 2/3 story building projecting above the surrounding houses	
53	C Aston		Construction will be aesthetically unsightly for both those residents living in close and fairly distant proximity due to the height and material nature of the construction and the level of security required	
54	G Katz		The construction will be an eyesore in the middle of an upmarket suburb which is for residential living only	
55			Mitigation of potential visual impacts– Describe in detail the measures which Eskom proposes to mitigate this risk. Provide architect drawings, and artist impression and 3D models of the proposed buildings, with the adjacent houses also modelled to indicate the anticipated 3D impact on the area. How would the four buildings on the site be suitably positioned to ensure acceptable impacts on the aesthetics of the area. Give an artist impression of the garden that will be planted to decrease the impact of the buildings. Describe the style and provide a list of the plants that will be planted, with the reasons. A commitment is required that only endemic vegetation will be planted. How will this garden be maintained. Erf 304 has an established garden with many trees that have been growing for more than 25 years and befitting the character of the neighbourhood's treed atmosphere. How does Eskom propose to build the substation without affecting the established garden and without affecting the aesthetic character of Sandown 24. Explain in detail and provide artist's impressions of how the four buildings will be built around the existing trees. Is the intention for all equipment to be under roof? What equipment will be visible to passers by? Will this facility look like a substation to the uninformed? Eskom and the design team is required to provide a contractual commitment that the perimeter walls and all buildings to be erected will suit the character of the area.	
56		A perimeter wall will be built with an internal electric fence – what type of wall will be built – architectural style, finish and height. Provide 3D renderings, architect drawings and artist impression of the perimeter wall (and all other buildings to be erected on ERF 304) to demonstrate that it will have no effect on the	A suitable wall of residential character will be built. Electric fencing must provide security but must not be visually intrusive. The substation components will not be visible from the road and will be fully enclosed within a residential façade.	

			aesthetics or character of Sandown 24. What will be the voltage of the electric fence and provide a description and artist impression of the type of fencing.	
57			Describe in tangible terms what is meant by “relatively high boundary wall” – how high is this, artist impression, what colour will it be painted, what will be the plaster finish and thickness of the wall, will it have pillars? Will the substation structure be visible from the road through the gate?	
58			How will the structures be designed in a “manner which complements the residential character of the area” – describe what Eskom deems to be the character of the area and therefore describe the style of the proposed building. There are disparate architectural styles in the area and how will Eskom define the character of the area in a manner which is equally acceptable to all residents? Provide architect drawings, and artist impression and 3D models of the proposed buildings, with the adjacent houses also modelled to indicate the anticipated 3D impact on the area.	Refer to architects drawings (conceptual) in Appendix C regarding the appearance of the proposed residential facade. The design of the façade is dependent on the functional purpose from an environmental mitigation perspective.
59			How will Eskom prevent the substation from being an eyesore and having a negative impact on the value of properties in Sandown 24. The Eskom substation in Ivy Road in Norwood has had graffiti painted on its walls which has never been removed, provide evidence that Eskom will maintain the property and how it will avoid this becoming an eyesore. Provide a schedule showing the frequency of maintenance related to the visual impact of Maningi; detailing what will be maintained, how often and by whom.	It is a recommendation of the EIA that Eskom prepare a site-specific maintenance schedule must be prepared by Eskom specifying maintenance actions for components, façade and landscaping.
60	C Aston	Lighting	Environmental nuisance in the form of security lighting during the hours of darkness	Security lighting will be provided throughout the evening. Lighting should however not constitute light pollution during the construction phase in accordance with the Environmental Management Plan.
61	L Aronson		Above this will be an overhead lighting tower and it will be continually lit all night by security lighting.	Security lighting will be discreet and may not constitute light pollution to adjacent residents.
62			Lighting for security purposes – describe the nature of lighting – size of the lights, direction in which they will point, wattage of the lights, number of lights and space between the lights; provide a photo of the proposed lights which will be used; as well as the hours during which these lights will be turned on. In addition, describe in detail how Eskom proposes to minimise the impact of lights affecting the neighbouring houses at night	Lighting specifications are undetermined at this stage. Security lighting will be operational throughout the evening. Lighting must not constitute light pollution.
63	A Mantle	Noise	There will be noise as a result of the low frequency humming	Noise impacts generated by the humming of the transformers will be attenuated by the fully enclosed, roofed purpose built structures. The noise will be attenuated to within acceptable standards for residential areas in accordance with the specialist report. Refer to the environmental noise report in Appendix D1. Periodic noise monitoring will be undertaken during the operational phase to ensure that noise conditions are met. High frequency noise will be screened through use of structure to within acceptable parameters for residential areas. Refer to the environmental noise report in Appendix D1. Periodic noise monitoring will be undertaken during the operational phase to ensure that noise conditions are met.
64	L Aronson		There will be the noise of its low frequency humming	
65	K Suchard		There will definitely be a frequency humming noise together with heat emissions.	
66	C Aston		Noise in the form of buzzing and cooler fans	
67	OD		The substation will be associated with a “low level humming”. Give details of the loudness in decibels of this humming during both dry and wet weather conditions. Provide evidence that the anticipated levels will fall within the legislated noise levels for a residential area. The low level humming is not like white noise and cannot be attenuated. Low level frequency sounds are known to be draining on humans exposed to these sounds, are “felt” rather than consciously “heard”, and are known to disturb sleep patterns. Will the noise impact assessment consider all octaves of sound and the impacts on health? How does Eskom propose compensating the residents of the area for the annoyance caused by these constant noises? Has	Noise levels will be reduced to within acceptable levels in terms of SANS recommendations. Refer to environmental noise report in Appendix D1. Periodic noise monitoring must be undertaken during operation to ensure that noise conditions are met.

			the impact on pets, whose hearing is more sensitive than human beings' been evaluated – provide details that the humming will have no impact on the wellbeing of pets in Sandown Ext. 24. By what percentage will the low level humming be reduced, and how will this compare to the bylaws; what will be the residual humming level (quantitative measures) and by how much will the humming get louder during wet conditions (quantitative measures). We wish to record that the residents of Sandown 24 are protected by legislation relating to “nuisance and abuse of rights” in South African law.	
68	OD		We object to the placement of the cooling fans. It is known that when these turn on and off, there will be a loud start up noise. This could happen at any time of day or night and this will cause a noise disturbance to residents of the area. Provide a detailed proposal on how the noise will be minimised and to what level this will occur. Describe in quantitative terms the noise levels associated with turning the fans on and off.	These will be operating primarily under coincident conditions of high ambient temperature and solar gain at periods of peak electricity consumption. This conditions will normally occur during daytime periods (06:00 – 22:00) as defined by SANS noise recommendations, and not normally during nighttime (22:00 – 06:00) when solar gain is zero, ambient temperatures are lower, and electricity consumption is at a minimum.
69	OD		What is the construction period of the project? It is required that the construction phase take cognisance of the requirements within the Environment Conservation Act (as well as the Gauteng Noise Control Regulations) in terms of working hours/days. Residents will not tolerate noise as result of construction activities outside of the stipulated periods. Therefore, no accelerated construction programme should be planned. We require detailed plan of the work schedules during construction, should erection of the substation at Erf 304 go ahead.	Mitigation of nuisance noise during construction should be undertaken in terms of the Environmental Management Plan. The estimated construction period of the proposed Maningi substation, including positioning of underground cables is 6 – 12 months depending on the selection of a suitable contractor through a tendering process.
70			What are the requirements during this phase in terms of materials and machinery to the site? Will the residential roads be able to accommodate the vehicles and required equipment? It has been brought to our attention that Eskom would need clearance of at least 15 meters to bring the transformers to the site, this is physically impossible given the built nature of the area. Explain in detail how Eskom proposes to circumvent this challenge.	The estimated construction period of the proposed Maningi substation, including positioning of underground cables is 6 – 12 months depending on the selection of a suitable contractor through a tendering process. Information regarding the estimated staff and vehicle requirements for the construction phase are therefore undetermined at this stage to be determined during the construction phase.
71			Is Eskom currently considering the construction of any other substations in Sandown Ext 24. Has Eskom purchased any other land or houses in the area in the past five years? If so, provide details of stand numbers and envisaged use for these. Is Eskom considering the purchase of any further tracts of land or houses in the neighbourhood.	The Maningi substation will cater for current and projected loads in the long term. No other sites are being considered within Sandown Extension 24.
72	L Aronson		Eskom states that the linkage to the grid will be underground but it is not clear from where the power supply is to be brought in and if by and overhead line.	Transmission cables to the Maningi substation will be underground. No overhead lines will be constructed.
73		Cable route	<p>The required infrastructure to bring power to and from the substation is already in place at Erf 360. Explain in detail the rationale why the Erf 304 position is better suited.</p> <p>ii. Provide a map indicating where the cables will run.</p> <p>iii. Guarantee that these cables will all be underground and will have not visible impact on the character of the neighbourhood. The residents require a written guarantee that Eskom will not, under any circumstances install the cables above ground, should the development go ahead.</p> <p>iv. How long will the process be to install these cables and what security will be provided to affected residents. How will the damage to roads, road crossing, pavements and residents properties be avoided. How will Eskom compensate the residents for damage to infrastructure in the area.</p> <p>v. Describe in detail how the power will be brought to and taken away from the substation using underground cables – type of cables, voltage etc.</p> <p>vi. Describe the process that will be taken to bury these cables; where they will be located and what servitudes Eskom has / will pursue to lay the cables?</p> <p>vii. Describe the process proposed by Eskom to obtain the required servitudes – will any land be expropriated?</p>	<p>i.</p> <p>ii. Map has been provided in BAR</p> <p>iii. Eskom cannot provide overhead cables as this will require that land is expropriated to maintain cable servitudes. The only feasible option in this case is positioning of the cables underground</p> <p>iv. Positioning of cables will be in road servitudes and pavements. Any damage to private property must be remediated by the contractor to pre-development conditions in line with the environmental management plan.</p> <p>v. 88kV cable network</p> <p>vi. Refer to map in BAR</p> <p>vii. No land will be expropriated as no overhead cables are proposed.</p> <p>viii. Any damage to private property must be remediated by the contractor to pre-development conditions in line with the environmental.</p> <p>ix. No or limited maintenance will be required for</p>

			<p>viii. What will be the impact on the environment during laying of the cables and how will the environment be fully remediated after installation?</p> <p>ix. How will these cables be maintained and who will be the affected parties? Give full details – how often maintenance will be affected, by whom, security provided during maintenance and maintenance process.</p> <p>x. Will there be restrictions on development on the surface above the proposed cabling?</p> <p>xi. It is estimated that the outgoing power will be at least 220 kV. Provide evidence that there are no health risks posed for residents.</p>	<p>x. underground cables. No restrictions to be imposed above underground cable</p> <p>xi. Cables will be located underground.</p>
74	OD	Flora and fauna	Has the ecosystem of Sandown 24 been evaluated in detail to ensure that the ecosystem of any fauna and flora endemic in the area will not be impacted by the construction of Maningi? Provide a detailed report containing the findings of this research and analysis.	The area is not regarded to be ecologically representative from a floral and faunal perspective given its urbanized status. The sighting and identification of potentially sensitive species must be reported to the independent Environmental Control Officer who should apply the appropriate mitigation measures during the construction phase.
75	OD		How does Eskom plan to eliminate the risk of the electric fencing to our eagle owls nesting in the area – how will it stop the owls electrocuting themselves on the electric fencing? Endangered eagle owls are regularly observed in the locality immediately adjacent to the proposed development. Describe in detail the measures that Eskom proposes and is committed to take in order to maintain the ecosystem of these rare birds, relating in this instance to increased light at night.	
76	OD	Pests	How will unwanted pests e.g. rats and mice be controlled by Eskom at the proposed substation. Provide detailed comments on measure which will be taken, how often these will be taken and what Eskom considers to be acceptable in terms of pest levels at the substation. Eskom will be required to put monies on deposit in trust to ensure that the costs associated with pest control are met by Eskom.	Control of pest species is to be accommodated in the site specific maintenance schedule to be compiled by Eskom.
77	OD	Nuisance impacts	How does Eskom propose to eliminate nuisance dust during the construction phase, what levels of dust will be produced and show that the impact on the residents of the area has been fully analysed – impact on swimming pools, houses and allergies of residents living in the area. Explain in detail how Eskom will eliminate the impact of dust on residents suffering from dust related allergies in the area. Show in detail that this has been fully analysed. What measures will be taken by Eskom?	Nuisance dust will be mitigated in accordance with the Environmental Management Plan
78	OD		We also require full details from Eskom on how nuisance noise and additional traffic impacts will be mitigated during the construction phase?	Mitigated in accordance with the Environmental Management Plan
79	OD	Traffic and road impacts	Mitigation of potential traffic impacts during construction phase - Describe in detail the measures which Eskom proposes to mitigate this risk. Provide a schedule of the vehicles which will require access to the neighbourhood during the construction phase – number of vehicles, weight and size and their description. The residents require an evaluation of traffic management and impact on road pavement conditions by a traffic engineer with the findings to be included in the BAR. Will Eskom be responsible for road maintenance during the construction period? Provide a schedule of how Eskom will maintain the roads in the area and the turnaround times to repair damage to our roads during the construction phase. Eskom will be required to put monies on deposit in trust to ensure the remediation of the local road infrastructure following the construction of the substation.	Eskom needs to undertake a tendering process in order to identify the contractor for the construction phase. There is currently no indication of the anticipated staff component. Eskom will undertake the necessary access and safety control measures in terms of the Environmental Management Plan. Remediation of all road surfaces impacted by the development including cabling will be undertaken to within pre-development conditions.
80	OD	Planning framework	The zoning for Sandown Ext 24 is currently for Residential 2. This equates to six units per acre, with height not exceeding two storeys. The proposed substation will be at least 7,5 metres in height which equates to three storeys. Describe in detail the reasons why the substation does not violate the existing zoning for the area. Describe in detail the rationale which Eskom has used to justify why the Johannesburg City Council should be relaxing the zoning to three storeys, while the rest of the area has been prescribed a lower density zoning, should this development proceed.	The height of the residential façade is unlikely to be a height of 7,5m and will be of the required height to maintain transformer clearances.
81	OD		The Residents accept that the local grid needs to be stabilised for the area.	The area of the site was specifically selected specifically because of

			However, it is not clear why it must be this area, and why the area has been selected as it is "equidistant" from 2 other substations. This argument needs to be substantiated (in layman's terms) for all to have a better understanding. Also, is this project required to compensate for power requirements for Gautrain or the increased density within a 400 metre diameter of the Gautrain stations as outlined in the Regional Spatial Development Framework?	its increasing residential density and proximity to the load centre as is international best practice. Locating the substation away from the load centre will pose significant cost and efficiency constraints.
82	OD	Stormwater	What will the coverage percentage of Erf 304 be after construction and how will storm water be handled? a. Will servitudes from neighbouring properties be required to handle storm water? b. Will there be separation of clean and "potentially contaminated" stormwater from the facility?	Approximately 50% of the site will be covered by impermeable surfaces/structures. The facility is not anticipated to generate stormwater flows exceeding the current residential situation. No stormwater contamination is possible during operation. It is not anticipated that stormwater contamination will occur in the event of catastrophic failure due to the provision of lined underground holding dams constructed on the site for the purpose of capturing oil and chemicals.
83	K Suchard		This proposal by Eskom should have been advertised (highlighted) in the Sandton Chronicle	The proposal was advertised in the Sandton Chronicle and in the Star Newspapers.
84	OD		Confusing locality of Grayston Drive, Rivonia Road and Grayston Preparatory in the BID.	Noted. Refer to Appendix A 1 for a locality plan.
			Indicating school as residential property is misleading considering health impacts from electro-magnetic radiation	Noted. The proximity of the school to the proposed substation is less than 200m (refer to BAR). The incidence of EMF on the school is considered negligible based on the nature of mitigating actions to be undertaken.
85	OD	Public Participation Process	Quite frankly the BID does not provide any comfort to the residents of Sandown 24, but once again confirms that the parties involved, including Eskom and its representative in the matter, have not been transparent with the residents. In addition, Eskom has shown no regard for any of these measures across its existing infrastructure in Sandown Ext. 24	The BID is an introductory document. The draft Basic Assessment Report for I&AP review indicates the proposal and planning measures taken to mitigate potential impacts on the environment. Eskom must provide a site specific maintenance schedule (for Maningi) for distribution to stakeholders in terms of which maintenance actions must be undertaken by Eskom Field Services.
86	S Leclercq		As you are well aware, we are objecting the erection of this substation. A group of the residents of Sandown Ext. 24 have evaluated the situation regarding the substation and the minutes which were distributed on Monday 28 May. In light of the extensive research which we still need to do with our advisors regarding our complaints, we hereby request a further extension up to close of business on 27 June 2008. Kindly confirm this extension in writing by no later than close of business Thursday 29th May 2008 and please could copy all on the email.	Noted. An extension was provided.
87	OD		Provide a scheduled detail of the process for the EIA and how all comments and queries will be addressed. How will feedback be provided, and within what time limit. An assessment of all direct, indirect, and cumulative impacts will be required in order for an informed decision to be made by the DEAT. The issues raised in this letter should be included in the assessment process. Is a site specific Environmental Management Plan ("EMP") for the design, construction and operation phases proposed to be compiled as part of the application submission to DEAT? Or is it Eskom's intention to utilise their generic EMP? Will this EMP be made available for public comment and scrutiny? Who will monitor the construction phase of the project to ensure compliance with the environmental authorisation (assuming one is issued) as well as the EMP. Where will the public be able to submit complaints or queries to during the construction phase? Eskom is required to provide a process to ensure that these will be meaningfully addressed in the BAR?	Comments and concerns contained in the Basic Assessment Report have been evaluated in terms of potential significance. All correspondence will be submitted to DEAT who will make an informed decision. The EMP appended as Appendix G1 is site specific based on identified potential impacts and the mitigation of those impacts. The EMP is available for scrutiny through the review period. Mitigation measures and compliance will be audited during the construction phase in terms of a site specific Environmental Management Plan as overseen by an Environmental Control Officer. A monitoring programme shall be implemented to determine the efficacy of the EMP. A Community Liaison Officer (CLO) must be informally appointed/nominated by the Sandown Extension 24 Community Forum to address the concerns of the community during the construction phase. Such concerns must be directed to the project team. The details of all relevant contact persons must be provided to the CLO.