**ATLANTIS ANKERLIG POWER STATION CONVERSION AND ASSOCIATED INFRASTRUCTURE:**

**COMMENTS AND RESPONSE REPORT**

**Scoping Phase**

| Issue | Raised by | Response |
|---|---|---|
| ***Types of Cooling Systems*** | | |
| Will the cooling towers utilise a dry cooling or wet cooling system? | Morné Theron, City of Cape Town – Blaauwberg Administration, 21 November 2007 | Eskom is investigating dry-cooling technology, and as such there will be no cooling towers. Air-cooled condensers will be used with dry cooling. Eskom is aware about the water problem in the area, for example, the options will consider the utilisation of municipal water or waste water from the Wesfleur Waste Water Plant. |
| ***Visual Impact*** | | |
| Why is a 60m high exhaust stack/ tower needed? | Morné Theron, City of Cape Town – Blaauwberg Administration, 21 November 2007 | The 60m exhaust/smoke stack has nothing to do with water conservation. It is for releasing the exhaust gases as high as possible into the atmosphere. |
| The normal height for the cooling tower is 30m. It is a concern that the anticipated towers will have a 60m height. | Morné Theron, City of Cape Town – Blaauwberg Administration, 21 November 2007 | The air cooled condensers are normally 50 m high, however, the reason for the **60m high exhaust stack** is to create extra velocities that will allow the gases to exit the plant quickly. |
| There is a worry about the double visual impact that the towers will create. Will there be more fuel gases? | Morné Theron, City of Cape Town – Blaauwberg Administration, 21 November 2007 | Comment noted. The EIA will investigate these concerns. |
| There is a concern about the cumulative impact, and that the towers are being increased from 4 to 9 units. Why was this not done earlier? | Morné Theron, City of Cape Town – Blaauwberg Administration, 21 November 2007 | The expansion of the facility from 4 to 9 units was considered in a previous EIA process undertaken in early 2007. The conversion project is driven by need and demand and at the |

| Issue | Raised by | Response |
|---|---|---|
| | | time it was not envisaged to run the plant at mid-merit. Cumulative impacts will be investigated in the EIA. |
| Is there a rationale between the lines and routes as shown on the map? (referring the blue, green and red options as depicted on the map in the information booklet). Is it possible to minimise the visual impact and the impact on the vegetation? | Morné Theron, City of Cape Town – Blaauwberg Administration, 21 November 2007 | The engineers will undertake an inspection of the routes and they will provide technical advice and make suggestions regarding the best option. A servitude with a total width of 55 m of land is required from the landowners, however, no decision has been made about the power line structure. Visual impacts and biodiversity will be investigated in the EIA process, and Eskom would consider biodiversity as it has done with the Plattekloof Nature Reserve servitudes. |
| ***Air Quality*** | | |
| Has Eskom considered wind direction? There are strong south easterly winds, also strong westerly winds. | Abe Croutz, Atlantis Residents and Ratepayers Association, 21 November 2007 | Air quality modelling takes into account wind direction – it will again be considered in the air quality investigations to be done as part of this EIA. It is important to get input back from the community, however, Eskom is engaged in ongoing monitoring. Liaison happens with the Atlantis Community Liaison Forum. |
| Requested clarity on how the electrical fields around the transmission lines and substations like Omega would affect local residents living in the area. | Brett Laing, Melkbosstrand Residents and Ratepayers Association, 21 November 2007 | Eskom subscribe to globally acceptable standards that Eskom has to observe and adhere to. All power line emissions comply with national and international standards. |
| What is the impact of the gases emitted by the turbines on the babies? | Emelia Blaauw, Atlantis Area Development Forum, 22 November 2007 | There is no effect from the Ankerlig emissions on the surrounding community. All emissions at Ankerlig are within local and international standards. A comprehensive air quality |

| Issue | Raised by | Response |
|---|---|---|
| | | assessment will be done as part of the EIA. |
| Will there be any outlet gases that will affect the community? | Sebastian Wewers, Atlantis Local Economic Development Forum, 23 November 2007 | The operation of the gas turbines is similar to the turbines that drive an aeroplane.' There will be outlet gases, however, there are norms in place to ensure that it is safe and that the community will not be affected. Carbon gases will be contained and is a low percentage. An air quality assessment will be undertaken as part of the EIA to quantify these emissions and any resultant impacts. |
| The community is concerned about the black cloud of smoke that is visible from the Ankerlig units. | Benito Hoop, Atlantis Local Economic Development Forum, 23 November 2007 | The smoke appears when the unit is started. The smoke disappears after a short while, as soon as the units have reached full load. The concern about possible dangers is noted, however, the units are quite safe. This will be considered as part of the air quality assessment. |
| The public would like to know what are the risks involved in the conversion of the OCGTs to CCGTs. | Benito Hoop, Atlantis Local Economic Development Forum, 23 November 2007 | The risk for the public is that if the units are not built that electricity interruptions can happen. There are other risks to be considered such as fire risk. A comprehensive risk analysis will be undertaken as part of this EIA in order to quantify any risks associated with the proposed additional fuel storage on the site. |
| It does not appear that the risk is too high, it seems that it is a good idea that the units are been built and the necessary conversion happens. | Benito Hoop, Atlantis Local Economic Development Forum, 23 November 2007 | Point noted. Load shedding has to happen and it not always a desirable option. In the 1970s too many power stations were built, this has changed in the 1980s. At present the cost of electricity produced by Eskom is amongst the lowest in the world. The facility at Ankerlig is |

| Issue | Raised by | Response |
|---|---|---|
| | | done with lots of consideration for the environment. Gas turbine generators are also being constructed at Mossel Bay, in the Eastern Cape and in KZN. |
| Suggested that he would pass information to the National Association for Clean Air, of which he is a member. Mike asked whether the National Association for Clean Air (NACA) and members of the Institute of Nuclear Engineers could visit the Ankerlig site and provide feedback to Eskom about possible airborne pollution and noise levels. | Mike Longden – Thurgood, NACA & Institute of Nuclear Engineers, 23 November 2007 | It was agreed that Nico Gewers would liaise with Mike and to arrange a visit to the Ankerlig site. |
| Asked whether Eskom is studying the air quality and emission. He also enquired about the measurement of airborne pollution. He noted that the perception of sound is more acute than the accurate hearing of the noise. | Mike Longden – Thurgood, NACA & Institute of Nuclear Engineers, 23 November 2007 | Eskom has to observe and operate work within relevant national and international standards. Eskom is currently doing air quality monitoring in the vicinity of the Ankerlig Power Station. |
| ***Fuel and Fuel Types*** | | |
| If a fuel pipeline is used to transport fuel to the Ankerlig, would it be underground or above ground? | Pat Titmuss, City of Cape Town – Blaauwberg Administration, 21 November 2007 | This will be investigated as part of an EIA considering alternatives for transporting fuel to site. This is part of a separate EIA process being undertaken by Bohlweki Environmental. |
| What are the future fuel sources to be used at Ankerlig, are you planning to use petroleum gas? | Raymond Williamson, Melkbosstrand Residents and Ratepayers Association, 21 November 2007 | This is an option that's been explored and investigated and would depend on the availability of large volumes of gas and the unit cost of the gas. However, the plant will be operated on liquid fuel until such time that other fuel sources, such as natural gas, becomes available. |

| Issue | Raised by | Response |
|---|---|---|
| ***Footprint*** | | |
| Discomfort exists over the incremental footprint of Eskom's activities within the Blaauwberg Area and the possibility of a second nuclear reactor at Koeberg. Eskom's cumulative footprint which includes powerlines, Ankerlig, Koeberg and the Omega substation is worrying. Eskom needs to provide information on the size of land that it will need for its projects over the next 10 years within the Blaauwberg Area. | Morné Theron, City of Cape Town – Blaauwberg Administration, 21 November 2007 | Comment noted. |
| The hope is that the project will take up minimum footprints on the environment. Koeberg is also taking up footprints in terms of its height and width. There is only 5% left of a very important vegetation pyramids. | Pat Titmuss, City of Cape Town – Blaauwberg Administration, 21 November 2007 | Comment noted. |
| What will be the actual size of the footprint be for the 9 units at Ankerlig? | Raymond Williamson, Melkbosstrand Residents and Ratepayers Association, 21 November 2007 | The footprint of the CCGT is still being determined. However, the Ankerlig Power Station site has ample space for implementing the conversion without having to purchase or find additional land. The current space is big enough for all the requirements of the conversion. |
| Where does the fuel come from? | Raymond Williamson, Melkbosstrand Residents and Ratepayers Association, 21 November 2007 | The fuel comes from the Caltex refinery in Milnerton. Eskom will undertake the necessary assessment regarding the transport options as part of a separate study. |

| Issue | Raised by | Response |
|---|---|---|
| It is presumed that the layout of the OCGT will allow for conversion. | Mike Longden-Thurgood, NACA & Institute of Nucleur Engineers, 23 November 2007 | The Ankerlig site has ample space for implementing the conversion without having to purchase or find additional land. The current space is big enough for all the requirements of the conversion. |
| ***Biodiversity*** | | |
| Eskom should think about the biodiversity offset. In terms of the impact of the environment, environmentalists have become aware that some developers say 'it is small thing' and then expect the environmental specialists to approve all the time. | Morné Theron, City of Cape Town – Blaauwberg Administration, 21 November 2007 | Comment note. The EIA study would focus strongly on all aspects of biodiversity conservation along servitudes/alignments being investigated. |
| The issue of the biodiversity offsets is an important one. | Morné Theron, City of Cape Town – Blaauwberg Administration, 21 November 2007 | Comment noted. The power station conversion will be undertaken on the existing power station site which has been considered in terms of biodiversity issues within previous EIA processes. All aspects relating to biodiversity along the proposed power line alignments will be investigated. The Koeberg power station has been beneficial to biodiversity. |
| ***Community Relations with Eskom*** | | |
| It appears that the project still needs to happen. The understanding is that this project has already begun and it left the community with a lot of hurt. We understand that the community cannot survive without Eskom and that a partnership is needed, however, a discussion should happen about the past hurts and current concerns. John Dean was given a | John Arends, Atlantis Residents and Ratepayers Association, 21 November 2007 | Comment is noted. All outstanding and unresolved issues, concerns and grievances need to be addressed by Eskom and the relevant parties. |

| Issue | Raised by | Response |
|---|---|---|
| list of our concerns, however, no report back has come back to the community. | | |
| 1. The treatment of the local community: The presence of the labour brokers caused conflict between the local workers and the people who were from outside the community and worked on the site.<br>2. No feedback was given to local workers who worked overtime.<br>3. Eskom should provide training and capacity building opportunities to the local community and not rely too much on outside expertise. This situation causes an economic justice concern for the local community.<br>4. Black Economic Empowerment is critical, the Republic of SA Constitution is clear about BEE. For example, a guest house initiative that was started by the local women in the community was not utilised since Eskom decided to support other accommodation facilities.<br>5. Favouritism and preferential treatment by Eskom to workers who are not local e.g. lack of access to transport for the local workforce.<br>Hire and Fire: Instantaneous decision-making that contradicts the LRA | John Arends, Atlantis Residents and Ratepayers Association, 21 November 2007 | Comments noted. The correct forum need to be created for the community leadership and Eskom to problem-solve around outstanding issues and concerns that might exist in Atlantis. |
| Proposed that the committee in question be disbanded by Eskom since the people were not fairly elected. | John Arends, Atlantis Residents and Ratepayers Association, 21 November | Comments noted. Albert van der Walt cautioned the meeting that it had no mandate to make the decision as proposed by John Arends. The point |

| Issue | Raised by | Response |
|---|---|---|
| | 2007 | was noted and it would be looked at. |
| Emphasised that there are no representation in the current Committee established by Eskom. Any committee must have the blessing of the community and the community's needs and concerns must be accommodated. | John Arends, Atlantis Residents and Ratepayers Association, 21 November 2007 | Comments noted. Shawn Johnston, Public Participation Facilitator indicated that processes are in place to solicited more information from the community about this issues and the point has been noted and will be taken forward. |
| ***New Technology versus Old Technology and Old Power Station Sites*** | | |
| What happened to the old existing power stations sites? Can the new system not be incorporated into the old systems? | Abe Croutz, Atlantis Residents and Ratepayers Association, 21 November 2007 | Power stations such as the Athlone power station, are very old stations, and will need expensive refurbishments to meet new technical and environmental standards. Also, for its operations, coal must be imported. Eskom's "old" power stations, such as Camden, Grootvlei and Komati are currently being returned-to-service, at huge costs. Hence where technically, environmentally and economically feasible, "old" power stations are being returned to service and incorporated into the system. |
| We are living in the 20th century. Has Eskom invented a device yet that will allow for the storing of current? | Abe Croutz, Atlantis Residents and Ratepayers Association, 21 November 2007 | One way of storing electricity is to use a battery and perhaps pump storage, e.g. Palmietrivier. Another form of generation is the use of wind turbines. This is one form of renewable energy that is very important for Eskom. The other form is solar thermal, where electricity can also be stored temporarily. |
| ***Communications with Local Stakeholders*** | | |
| It is important that Eskom provides information on the technical issues. | Abe Croutz, Atlantis Residents and Ratepayers Association, 21 November | Comment noted. The community should be reassured that they have been informed in the past about the project. It is important that the |

| Issue | Raised by | Response |
|---|---|---|
| | 2007 | community voice out how they will be impacted. |
| Melkbosstrand residents require clarity around Eskom's processes and projects in the area around Melkbosstrand, Duinefontein, Atlantis, Klein Dassenberg and Morning Star. Improved communications strategy is needed for communicating with surrounding communities. | Raymond Williamson, Melkbosstrand Residents and Ratepayers Association, 21 November 2007 | This is an issue that has been noted and needs to be addressed through the correct mechanism. |
| Raymond requested that all the stakeholders be informed about future processes. He mentioned that the Melkbosstrand population stands at 16000 and the Atlantis population comprise about 70000 residents. | Raymond Williamson, Melkbosstrand Residents and Ratepayers Association, 21 November 2007 | Comment noted. |
| Information dissemination options could include the Tygerberger, Table Talk newspapers. Additional stakeholders to consider are the Nederduitse Gereformeerde Kerk (including the farming communities), and another congregation with Willem Steenkamp. Shawn will get the contact details from Brett and Raymond. | Raymond Williamson, Melkbosstrand Residents and Ratepayers Association, 21 November 2007 | Comment noted. |
| The Melkbosstrand Residents and Ratepayers Association want to be a proactive governing body that could assist and support Eskom initiatives. | Brett Laing, Melkbosstrand Residents and Ratepayers Association, 21 November 2007 | Comment noted. |
| There are many people in the community that do not know the developments. Information does not filter to the people on the ground. Another creative way needs to be found to disseminate information to people, for example, information on presentation slides are very useful but also very technical. | Cheryldene Hector, Atlantis Area Development Forum, 22 November 2007 | Comment noted. |

| Issue | Raised by | Response |
|---|---|---|
| There are concerns regarding the way the project is developing. The project growth in terms of how it is moving forward seems a continual growth. Does Eskom consider a strong increase in the number of people and houses along the Westcoast? It also seems that the area of Kalbaskraal and the usage of electricity are not taking into consideration within the spectrum of Eskom's growth. The projections should be more realistic in terms of what is actually happening and it will take a while before the community needs are addressed. | Cheryldene Hector, Atlantis Area Development Forum, 22 November 2007 | Comment noted. During the 1970s Eskom built too much. From 1994 to now, the country had sufficient electricity. Electricity price increase will happen. Behaviour patterns will be changed because of electricity increase. When Eskom builds too much in advance, it becomes unwise for Eskom regarding planning. |
| It is important that the information from Eskom is disseminated at the schools and that energy education happens at schools and during home visits. | Cheryldene Hector, Atlantis Area Development Forum, 22 November 2007 | Comment noted. Eskom does have a department that deals with electricity education and community outreach. |
| It is important to target the lowest levels in the education sector, the message will get across. The principal forum is another body to consider. Information on saving energy is also incorporated in the curriculum life skills. | Waldy Kastoor, Atlantis Area Development Forum, 22 November 2007 | Comment noted. |
| When will the project be completed? | Cheryldene Hector, Atlantis Area Development Forum, 22 November 2007 | The EIA process/application will be completed by 2008. This includes the finalisation of the scoping report, comments, the EIA and EMP. The construction associated with the power station conversion is envisaged to take approximately 32 months to be completed. |

| Issue | Raised by | Response |
|---|---|---|
| Eskom is encouraged to use the local media especially the local radio station (Radio Atlantis, 107.9 fm) to inform the community about the project. | Sebastian Wewers, Atlantis Local Economic Development Forum, 23 November 2007 | Comment noted. Radio Atlantis will be used to advertise public meetings and the availability of reports during the EIA process. |
| ***Environmental Concerns*** | | |
| Is what we have currently, the first phase of the project? What will it do to the environment with regard to the social and economic perspective? | Noël Williams, Atlantis Residents and Ratepayers Association, 21 November 2007 | The Ankerlig Power Station conversion and transmission integration project can be seen as a third phase of the original Atlantis OCGT power station project. The construction of the initial OCGT units (i.e. the four units now in operation) was the first phase of the project. The second phase of the project (currently under construction) involves the expansion (capacity increase) of the power station by adding another five OCGT units, four fuel tanks and a switchyard to the power station. The potential impacts on the social environment as a result of the proposed project will be considered within the Social Impact Assessment (SIA) as part of this EIA. |
| How many loads of diesel will be required and what is the impact of the quantity of diesel usage? How will the environment be affected in terms of transport, traffic flow, the environment and roads? Mr. Williams noted that none of these issues were properly addressed previously. | Noël Williams, Atlantis Residents and Ratepayers Association, 21 November 2007 | Comment noted. Road tanker transporting of fuel is constantly being monitored. Alternative means of transporting fuel to the site are being considered as part of a different EIA process. The impact on the roads and traffic movements as a result of additional fuel transport to the CCGT power station will be addressed within the EIA. |

| Issue | Raised by | Response |
|---|---|---|
| Eskom need to consider the establishment of an environmental monitoring committee. The committee should comprise representatives from the province, the City, community, and unions. The committee should be open and transparent and include interested and affected parties. Mr Williams made the following observation about the previous Eskom project:<br>*"The company had no relationship with the community except for the people that worked for it."* | Noël Williams, Atlantis Residents and Ratepayers Association, 21 November 2007 | Comment noted. This would be looked at a part of bulding and improving communications between all stakeholders and Eskom and clarifying perceived unresolved issues around the Ankerlig project. |
| Noted that the past way of operations should be accepted for how these transpired. There is, however, an expectation around new relations.<br>There are two things in Atlantis that cumulatively will impact on the whole community.<br>(1) The new City of Cape Town Regional Waste Disposal Site; and,<br>(2) The extension of the clay mine (Apollo Bricks)<br>An additional concern will be about diesel emissions from Ankerlig and smog from the brickworks. The people of Atlantis must become more environmentally aware. The Atlantis area does not have enough water to support the Ankerlig conversion, 90% of the water in used in Atlantis is from the local aquafier. | Noël Williams, Atlantis Residents and Ratepayers Association, 21 November 2007 | Comment noted. Air quality impacts associated with the power station will be assessed within the EIA, and will include a consideration of cumulative impacts of air emissions in the area. |

| Issue | Raised by | Response |
|---|---|---|
| The landfill site will become problematic at a later stage. In all cases infrastructure is the last thing to be considered. The question is whether the City and Eskom is communicating to each other? The community certainly does not seem to have a plan. | Raymond Williamson, Melkbosstrand Residents and Ratepayers Association, 21 November 2007 | Comment noted. The location of the landfill site will be considered within the current EIA process for the power station conversion and transmission line. |
| How will the new proposed City of Cape Town regional landfill site affect the project? | Raymond Williamson, Melkbosstrand Residents and Ratepayers Association, 21 November 2007 | The location of the landfill site will be considered within the current EIA process for the power station conversion and transmission line. |
| As the first adjacent factory to the new power station OCGT. It is important that we stay informed of the environmental impact assessment and new developments and effects on the Mondi manufacturing plant. We are concerned about the following:<br>1. Impact on the ecology, fauna and flora;<br>2. Impact on the social environment of the Atlantis Area; and,<br>3. Impacts of noise levels and air quality. | Angelo Harmse, SHEQ Manager, Mondi Plastic Containers, 10 January 2008 | Comment noted. |
| ***Energy Output from Ankerlig Power Station*** | | |
| What is the current energy capacity at Ankerlig? How many mega watts? | Raymond Williamson, Melkbosstrand Residents and Ratepayers Association, 21 November 2007 | Approximately 147-150 MW per unit. The total nominal capacity authorised for the power station (i.e. the initial 4 units and the additional 5 units) is 1 350 MW. |
| ***Noise*** | | |
| Will the units produce more noise? | Raymond Williamson, Melkbosstrand Residents and Ratepayers Association, | The units will not necessary produce more noise. Since the units will run for longer times, it might produce prolonged noise. A detailed noise |

| Issue | Raised by | Response |
|---|---|---|
| | 21 November 2007 | impact assessment will be undertaken as part of the EIA. |
| What will future noise levels be like, compared to the current noise levels of the Ankerlig Plant? | Raymond Williamson, Melkbosstrand Residents and Ratepayers Association, 21 November 2007 | The EIA process will fully investigate noise levels. This study will include the consideration of cumulative impacts and will provide a comparison of the potential noise impacts with the existing situation. |
| ***Labour Concerns*** | | |
| What will labour opportunities consist of? | Raymond Williamson, Melkbosstrand Residents and Ratepayers Association, 21 November 2007 | All labour contracting at Ankerlig is done through Eskom's procurement processes in accordance with Eskom's governance requirements. |
| ***Road Transport*** | | |
| The current road transport has already caused fatigue to the roads. What about rail options? | Raymond Williamson, Melkbosstrand Residents and Ratepayers Association, 21 November 2007 | Pipeline and rail options are currently being explored as part of a separate EIA process. |
| If there is not an increase in consumption for the same load factor, is Eskom able to quantify how many tankers will be used? | Brett Laing, Melkbosstrand Residents and Ratepayers Association, 21 November 2007 | There will be an increase in fuel consumption, due to the increased load factor (and not because of the conversion). The increase in road tanker transport due to this, as well as the resultant impact in terms of risk and pavement (road surface) will be investigated as part of the scope of this EIA. |
| In terms of the route to be used to transport the fuel, could the entry be from the N7 road (referring to a road that might not affect the Melkbosstrand community directly). | Raymond Williamson, Melkbosstrand Residents and Ratepayers Association, 21 November 2007 | Part of the total process is to explore other options than road transport. This issue is the subject of a separate EIA process already underway. |

| Issue | Raised by | Response |
|---|---|---|
| ***Power line Alignments*** | | |
| Requested for an explanation about the different power line options (refering to the colour coded powerline routes in the information booklet). | Brett Laing, Melkbosstrand Residents and Ratepayers Association, 21 November 2007 | The EIA process will focus on clarifying the best power line options to be taken forward for further investigation in the EIA process. |
| ***Impacts on land use*** | | |
| Apollo Bricks are currently investigating the expansion of activities to the east up to the railway servitude and to the south up to the Old Dassenberg Road. These plans should be considered in the determination of a preferred power line alignment. | Apollo Bricks<br>15 January 2008 | Comment noted. |
| Delta 200 Airstrip is used 7 days a week as a drop zone for the Stellenbosch sky divers club. Options B and C would impact significantly on this drop zone and the air space associated with the air strip. | Manager – Delta 200 Airstrip<br>15 January 2008 | Comment noted. |
| ***Eskom's Social Responsibility*** | | |
| What will Eskom put back into the communities? Raymond made the example of the Duinefontein community facility next to Koeberg Nucleur Power Plant. However, without community consent, Eskom sold the facility resulting in a deterioration of the facility and no social responsibility in the local Duinefontein/Melkbosstrand community. | Raymond Williamson, Melkbosstrand Residents and Ratepayers Association, 21 November 2007 | Comment noted. This should be investigated and dealt with through the Eskom Developmnent Foundation who deals with Eskom's social responsibility aspects. The point was noted. |
| ***Safety and Security*** | | |
| The community is concerned about the Koeberg nuclear plant especially how it might impact on the community as a whole. There are real fears that | Emelia Blaauw, Atlantis Area Development Forum, 22 November 2007 | There are sufficient systems in place at Koeberg for any eventuality. Koeberg is already in existence for 30 years and there is no evidence |

| Issue | Raised by | Response |
|---|---|---|
| the Ankerlig plant is in close proximity to the community in addition to the anticipated dumping site and Koeberg. The community fear that the gasses emitted from the power station and the dumping site will cause harmful effects to the community and especially the babies. | | of any harmful effects on the community. The existing OCGT does not pose any danger to the community. All impacts have been identified and are appropriately mitigated. It will cause smoke (when it starts up) and noise but no other concerns. The dangers are the normal dangers that we can get on an everyday basis. |
| ***Demand Management*** | | |
| How does Eskom cope with the current demand for electricity? | Benito Hoop, Atlantis Local Economic Development Forum, 23 November 2007 | Eskom is currently employing a range of measures to ensure that the demand for electricity is met. This includes *inter alia*, controlled load-shedding to ease the pressure on the Eskom system. Other options include the rapid construction of gas turbines, to assist in meeting the peak demand. Gas 1 is anticipated to be finalised by end of 2008. The conversion of the existing OCGTs to CCGTs also forms part of this initiative. Demand-side Management is a third initiative to ensure that South Africa becomes more energy-efficient. Eskom's mothballed power stations (Camden, Grootvlei and Komati) are currently being returned to service, and will add more base-load to the system. Other base-load capacity is also currently being built. The Chief Executive of Eskom warned that the country will have electricity interruptions until 2012 due to the demand for electricity. |

| Issue | Raised by | Response |
|---|---|---|
| | ***ROD*** | |
| Asked whether Eskom needed a RoD for the original project (Gas1) or for the conversion of the OCGT. | Mike Longden – Thurgood, NACA & Institute of Nuclear Engineers, 23 November 2007 | An RoD has already been issued for the Gas 1 expansion project. Eskom require authorisation to convert the OCGT units to a CCGT units. |
| | ***Stakeholder Liaison*** | |
| In the event that issues are identified, who should be liaised with? | Mike Longden – Thurgood, NACA & Institute of Nuclear Engineers, 23 November 2007 | All liaisons in terms of public participation should be through the public participation specialist – details are provided within the adverts placed as well as in notices and BID distributed to all identified I&APs and stakeholders. |

**ATLANTIS ANKERLIG POWER STATION CONVERSION AND ASSOCIATED INFRASTRUCTURE:**

**COMMENTS AND RESPONSE REPORT**

**Scoping Phase – Draft Scoping Report Review**

| Issue | Raised by | Response |
|---|---|---|
| ***Proposed 400kV Ankerlig-Omega Transmission Line Alternatives*** | | |
| Expressed concern that the proposed power line would be running over their farm. A number of heritage sites have been identified on their farm. An environmental assessment has been done for sand mining on the farm. | Nico Stoffberg, owner Vaatjie Farm, KSW Koeberg Visitor Centre, 13 February, 2008 | Comment was noted. A heritage study has been done for the proposed power line alternatives, and sites on the properties along these alternatives have been noted. |
| Asked why the transmission line Option A did not follow the Atlantis-Koeberg 1 servitude in its entirety but passes straight on to the Koenberg-Stikland 1 servitude creating an unused triangle at Koeberg. Indicated that he preferred that Option A follow all the existing Atlantis-Koeberg 1 and Koeberg-Stikland 1 transmission lines for the entire route. There might be additional cost now but this might not contribute to prosperity in the future, the power line might be obliterating space for a long time. | Raymond Williamson, KSW Koeberg Visitor Centre, 13 February 2008 | Power lines are extremely expensive to construct and that the length of the line and the number of bends affect the overall cost. It is however agreed that the EIA would consider this proposed alignment of the power line, and that Eskom Transmission would look at the feasibility of this option. *Subsequent to this meeting, this alternative has been included as a sub-alternative for consideration in the EIA Phase of the study (refer to Chapter 8 of the final Scoping Report).*<br><br>The route identified is a proposed power line corridor of between 500m and 1km. After the negotiations with the farm owners the final route would be aligned within the nominated preferred corridor. |
| Supports Option A, based on own observations and site knowledge, i.e. Koeberg Nature Reserve. | Hilton Westman, Eskom Koeberg Conservation Officer, comment by fax 18 February 2008 | Comment noted. |
| In the light of the above, and as stated in this letter, Cape Metropolitan Investments 006 (Pty) Ltd would be comfortable and support the proposed “Option A” corridor alignment for the intended transmission power lines, mainly on the grounds of its more practical proposed | Andre Engelbrecht, Cape Metropolitan Investments, comment by fax and e-mail, 22 February 2008. | Comment noted. |

| Issue | Raised by | Response |
|---|---|---|
| servitude positioning and site specific location, which will not have a major impact on, or directly negate the potential for the establishment of a secondary international airport for Cape Town, and deny the Atlantis Township and Atlantis Industrial Area the opportunity for socio-economic up-liftment and urban renewal, excluding these communities from critical job creation and tertiary education programs. Refer to letter attached at the end of this Comments & Response Report. | | |
| P.29, Section 3.2 Integration of the CCGT Power Station into the National Grid: From a question I put at today's meeting at Koeberg, I understand that the 765/400 kV transformer at the Omega substation can be operated both ways, ie in the event that there's a need to export power supplies out from Ankerlig to the east. | Mike Longden-Thorgood – NACA (National Association of Clean Air) & Institute for Nuclear Engineers, comments by e-mail, 14 February 2008 | Comment noted. |
| P.31, Power line routes to the mega 400 kV sub-station: I presume that the local population will have pronounced their preferences, but on balance I would choose in this order: first red; second blue; third, green, don't consider it at all. (Note: reading Chapter 7 it seems that I was right. No, I did not read it first!) | Mike Longden-Thorgood – NACA (National Association of Clean Air) & Institute for Nuclear Engineers, comments by e-mail, 14 February 2008 | Comment noted. |
| Footnote: an attendee from Melkbos asked why the preferred line A by-passes the inset "vee" just east of the Koeberg PS. The response was that this would be looked at. However, there's one specific aspect which shouldn't be overlooked, namely that if the "vee" line was to be chosen, that would introduce *two* new supporting towers which would need to be strengthened to take the sideways loading from the overhead conductors attached to them. However, from the aspect of recreation**;** or for crop growing**;** or archeologically**;** or from the point of view of flora and fauna**;** or *who has their eye on this vee-* | Mike Longden-Thorgood – NACA (National Association of Clean Air) & Institute for Nuclear Engineers, comments by e-mail, 14 February 2008 | Eskom Transmission would investigate the introduction of a sub-option to cater for this.<br><br>*Subsequent to this meeting, this alternative has been included as a sub-alternative for consideration in the EIA Phase of the study (refer to Chapter 8 of the final Scoping Report).* |

| Issue | Raised by | Response |
|---|---|---|
| *shaped piece of land for development?* - what is it which seemingly makes it so important for it not to be trapped by the power lines? | | |
| Section 3.2.2 Project Operation Phase - Quoting**:** "*The expected lifespan of the proposed transmission line is between 35 and 40 years* - - -". I don't know what criteria Eskom adopts when it establishes the route for a new power line, but as it requires a 55 metre wide servitude, and in view of the life of a typical power line and its support structure, would it not be advisable to adopt a 110 metre wide servitude? On this basis, and assuming that the CCGT would be reconstructed on the same site once it had reached the end of *its* life, in particular assuming that the power station site remains the best one for reconstruction, a double width servitude would allow a parallel line to be constructed, after which the old one is deconstructed. In this event there should be no need for future servitude negotiations because it would all have been settled at the outset. (Also refer to Clause 14 below). | Mike Longden-Thorgood – NACA (National Association of Clean Air) & Institute for Nuclear Engineers, comments by e-mail, 14 February 2008 | It is Eskom Transmission's standard practice to acquire only the property which is required for power lines to be constructed. It is not considered to be economically feasible to obtain wider servitudes than are required for power lines. |
| ***Water*** | | |
| Enquired about the current underground water at Atlantis. | Nico Stoffberg, owner Vaatjie Farm, KSW Koeberg Visitor Centre, 13 February, 2008 | Different options have been explored around water usage, including using recycled waste water from the Wesfleur Water Treatment Works, potable municipal water and the desalination of sea water. The EIA study would be exploring all water usage options. |
| Asked what type of water would be used for cooling. Would it be potable or desalinated water? | Hans Linde, KSW Koeberg Visitor Centre, 13 February 2008 | Potable water from the Witzand Treatment Works has been identified as the preferred option in the short-term. However, Eskom will continue investigating other options for use in the medium-to long-term. |
| Asked about the desalination of sea water and why Eskom is not embarking on this process instead of placing | Hans Linde, KSW Koeberg Visitor Centre, 13 February | Due to the restrictions around Koeberg as imposed by the National Nuclear Regulator, sea water cannot be |

| Issue | Raised by | Response |
|---|---|---|
| additional pressure on local resources. | 2008 | sourced from within the Koeberg property. Therefore, an abstraction point to the north of Koeberg was considered. The coastline environment in this area is considered to be highly sensitive, and the topography makes the siting of a feasible abstraction point difficult. Therefore, this option was excluded as a feasible alternative. |
| He noted that Saldannha is also considering desalination and asked Eskom to consider this as an option. | Hans Linde, KSW Koeberg Visitor Centre, 13 February 2008 | Comment noted. |
| Asked about the amount of water that would be used at the facility. | Tyron Williams, Dassenberg Residents and Ratepayers Association, PM, Rebecca Van Amsterdam Hall, 13 February 2008 | It is estimated that 500 kilolitres per day (0,5 Ml) will be used in the power generation process. Discussions are underway with the City of Cape Town about obtaining potable water from the water treatment works. He explained that the water is used in a closed circuit and will be re-circulated through the cooling system. |
| Draft ESR - p.25, last para, quote: "Treated domestic waste water is utilised by the CoCT to recharge the groundwater system of the Atlantis primary aquifer system. Therefore, the abstraction of effluent from the domestic wastewater stream would impact on the balance of this system and, as such, on the availability of groundwater within this aquifer, which is the primary source of water to the Atlantis area. The option was not supported by the CoCT".<br><br>I am curious about this. Whatever water is going to be abstracted from another aquifer, what amount would be lost in its flow through the CCGT systems; would it become contaminated during its flow; what amount could be returned to the aquifer which might have satisfied the | Mike Longden-Thorgood – NACA (National Association of Clean Air) & Institute for Nuclear Engineers, comments by e-mail, 14 February 2008 | During the Scoping Study, the City of Cape Town was consulted regarding the various options available to Eskom for water supply – i.e. the use of domestic water from the Wesfleur WWTW, the use of industrial wastewater from the WWTW and the use of potable water from the Witzand water treatment works. The use of domestic wastewater was not considered feasible as the CoCT indicated that this would impact on the Atlantis aquifer system. The possibility of returning the wastewater from the power station to the wastewater system was discussed as an option to supplement the supply of water to the aquifer. However, it was indicated that this wastewater would firstly be considered industrial wastewater which would not be returned to the aquifer system, and |

| Issue | Raised by | Response |
|---|---|---|
| CoCT? Without further important information, I get the impression that situation has been looked at rather too superficially. Whatever alternative has been selected will emerge as I read on, of course, but what water supply would be the least expensive to use?<br><br>Was the CoCT provided with inadequate information to allow them to be able to make any other but a negative decision? Indeed, did they ask for further information? If they did ask the questions, was it they relevant information they were requesting? And if they didn't ask? | | secondly that this wastewater would potentially be highly saline and would impact on the balance of the system.<br><br>The CoCT requested information regarding the quantities of water which Eskom required and also requested that an opinion from the CSIR be sought (as the CSIR had previously provided input in terms of modelling of the Atlantis aquifer system). In consultation with the CSIR, the CoCT again indicated that use of the domestic wastewater from the Wesfleur WWTW would not be feasible.<br><br>The use of potable water as a water resource has been identified as the preferred option in the short-term. Eskom is, however, currently in discussions with City of Cape Town regarding the various options available. |
| 2 Ibid, p.26, 2nd para: the estimated daily volume requirement for water is ~500 m-cubed/day. I see that it is the intention that whatever balance of water remains after exiting the steam condensers will be discharged direct into the "hydrological barrier". Will the discharged water be contaminated? However, because it will presumably be used in closed condensers, where could any contamination arise from? For example, is there a need for some chemical processing of the feed water to prevent the internal surface of condenser pipes from becoming coated with residues?<br><br>Surely, because air-cooled condensing towers are proposed, this water will be what is used to supply steam to the turbines. Does this mean that it is anticipated that | Mike Longden-Thorgood – NACA (National Association of Clean Air) & Institute for Nuclear Engineers, comments by e-mail, 14 February 2008 | The intention is to operate the power station as a zero liquid effluent discharge (ZLED) system. Therefore, water from the power station will not be fed into the industrial wastewater system which feeds the hydrological barrier.<br><br>There will be a Condensate Polishing Plant (CPP) to treat/polish condensate to desired qualities, before it is fed back into the HRSG as part of the steam cycle. Small quantities of non-hazardous regeneration wastes, on the water treatment side, will have to be disposed of appropriately at a waste disposal site. |

| Issue | Raised by | Response |
|---|---|---|
| around 500 metre cubed of water will disappear into the atmosphere per day, apart from that which is condensed? The condensed water will be "polished" and reused.<br><br>It is interesting that, because condensing water is to be obtained from another source than the Atlantis aquifer, any amount which can be pumped into the hydrological barrier for Atlantis could have the beneficial effect of actually increasing water availability for Atlantis by providing a stop-flow situation, thus reducing the normal aquifer flow towards the sea.<br><br>Obviously we have a highly complex situation here, with cost effectiveness of the water supply to the CCGT units vs increasing the water supply for Atlantis, the latter becoming necessary as the town slowly emerges from its long period of stagnation.<br><br>But here's another possible conflict: if the latter scheme is adopted, if and until Atlantis requires more potable water, could recharging the hydrological barrier from another source (eg see next Section c in the DSR: The use of potable water form the Witzand Water Treatment Works) effectively increase the height of the water table in the Atlantis aquifer to an unacceptably high level until Atlantis requires more potable water? If this was to be the case, there might be a need to consider the possibility of a direct diversion bypass line for the condenser discharge water into the sea.<br><br>Thus we have a tight juxtaposition of economics of the condenser water supply for the CCGT and the social | | |

| Issue | Raised by | Response |
|---|---|---|
| situation relating to the availability of future increased potable water supplies for Atlantis. Quoting from the same para: "Such an investigation would require extensive modelling to provide meaningful results". Actually, I would tentatively suggest that it's data which are required, not just results. | | |
| 3 Ibid, section d) Seawater desalination: I have no idea what power requirements would be required for a reverse osmosis seawater desalination plant, but I would guess there might be a need to consider the possibility of installing a tenth CCGT unit to provide the required electricity supplies. | Mike Longden-Thorgood – NACA (National Association of Clean Air) & Institute for Nuclear Engineers, comments by e-mail, 14 February 2008 | Power requirements for such a plant, as well as energy penalties incurred for pumping this water over a distance of approximately 12 km to the CCGT plant, would render the whole operation less efficient. |
| 4 Ibid, p.27, highlighted para just before Section 3.1.2: this uses the word "nominated" for using the Witzand water. I respectfully suggest that this is the wrong word to use. "Chosen" or "Selected" are more appropriate alternatives. It's individuals who are nominated in a voting process. | Mike Longden-Thorgood – NACA (National Association of Clean Air) & Institute for Nuclear Engineers, comments by e-mail, 14 February 2008 | Comment noted. However, the EIA guidelines allow for the 'nomination'' of preferred alternatives. Hence the use of the word in the document. |
| Ibid, p.29, top para: litres can be expressed in cubic metres, density effects being taken into account. Cubic metres are far more meaningful than volumes expressed in millions of litres. May I suggest that where litres are quoted that the equivalent volume for the fuel be given in cubic metres in brackets immediately following. | Mike Longden-Thorgood – NACA (National Association of Clean Air) & Institute for Nuclear Engineers, comments by e-mail, 14 February 2008 | Comment noted. The changes have been made accordingly within the document (refer to p29). |
| P.84, Social investment: I wonder if the matter of improving future water supplies has been the subject of questioning from Atlantis residents? I have raised the point above that using water extracted from a remote aquifer and re-injecting what remains into the Atlantis aquifer towards the sea could reduce the run-off from the aquifer, and result in an increase in water availability for Atlantis. | Mike Longden-Thorgood – NACA (National Association of Clean Air) & Institute for Nuclear Engineers, comments by e-mail, 14 February 2008 | Comments noted. |

| Issue | Raised by | Response |
|---|---|---|
| I suggest that this possibility needs to be investigated to ascertain if the idea is a practical one. If it is, then consideration would also need to be given to the situation if ever in the future the Ankerlig power station was to be decommissioned the returned to its "greenfield" status. | | |
| ***Noise*** | | |
| Raised a concern over the potential noise impact associated with the power station conversion. He asked whether the impact on ambient noise level would be measured and whether it would be done during day and night. He asked whether the wind direction towards the residential areas and small holdings were taken into account. | Leon Cillie, KSW Koeberg Visitor Centre, 13 February 2008 | Comment noted. The necessary noise measurements will be done as part of the noise impact assessment, as required in terms of legislation. As a norm, Eskom measure noise and air quality emissions from the power station. |
| Indicated that the noise levels they experience are real and as local stakeholders they would like to see it being addressed and dealt with. | Tyron Williams, Dassenberg Residents and Ratepayers Association, PM, Rebecca Van Amsterdam Hall, 13 February 2008 | Comment noted. This is part of the specialist study. Additional noise sources associated with the conversion (such as the fans necessary for cooling) would need to be considered within the noise study in order to clarify all noise levels from the entire Ankerlig Power Station. |
| The biggest concern of local stakeholders in their area was the level of noise and the emissions from the power station stacks during start up. | Tyron Williams, Dassenberg Residents and Ratepayers Association, PM, Rebecca Van Amsterdam Hall, 13 February 2008 | Comment noted. |
| Concern, possible noise pollution as currently experienced by some members. | Tyron Williams, Dassenberg Residents and Ratepayers Association, comment by fax, 11 February 2008 | Comment noted. |
| Appendix J, Section 4.1 Meteorology: My point really has no bearing on the noise and pollution emissions for the Ankerlig facilities. But I am concerned about equating the | Mike Longden-Thorgood – NACA (National Association of Clean Air) & Institute for | Comments noted. The climate of the Western Cape is classified as being Mediterranean. |

| Issue | Raised by | Response |
|---|---|---|
| meteorology of the Western Cape with that of a Mediterranean climate merely because "rain occurs predominantly in winter and the summer months are generally dry" (quote from 2nd para). This doesn't seems to me to reflect a true comparison. I prepared a lengthy and boring presentation on my thesis, but which I have relegated elsewhere! | Nuclear Engineers, comments by e-mail, 14 February 2008 | |
| Appendix J, p.9 last para: this para starts "*The predicted noise levels will then be compared against current legislated limits, as well as local and international guidelines, in order to quantify noise impacts in the surrounding areas. Based on the expected locations with maximum impact, an appropriate noise monitoring programme will be put forward, in order to ensure future compliance with noise guidelines*".<br><br>I think that the last sentence needs a little more thought. For example, a scheme which requires the operational power of a gas turbine to be limited to reduce noise from its exhaust to achieve the guidelines would not be acceptable, I am sure. A situation could arise which requires some form of mechanical noise limiting design feature to be added to the exhaust system - assuming, of course, that this will be the point of greatest noise emission.<br><br>From the existing four turbines, I assume that the noise level - some sort of whining noise I would imagine arising from the bearings - has been established to lie within acceptable limits. But we all know that noise isn't necessarily a factor of loudness alone - witness those people who have vast output loudspeakers fitted in their | Mike Longden-Thorgood – NACA (National Association of Clean Air) & Institute for Nuclear Engineers, comments by e-mail, 14 February 2008 | Comments noted. |

| Issue | Raised by | Response |
|---|---|---|
| cars which, an audiologist has assured me, can be expected to cause a noticeable hearing loss after about ten years.<br><br>I haven't read the noise regulations, and I wonder if they include a factor for the *quality* of the sound. Quality is probably the most difficult characteristic of sound for which to formulate a sensible assessment, because noise is so subjective. But it is for this very *subjective* reason that some solution needs to be sought, if one isn't already available. I am concerned that there isn't any indication that the noise regulations include assessing noise quality as well as intensity. | | |
| **Heritage** | | |
| Appendix P - Heritage study: On p.2 mention is made that Line A "*is considered satisfactory as is also runs parallel mostly to an existing corridor which has already been disturbed*". That statement is absolutely true - it can't be faulted. However, is it not worthy of being mentioned that this particular corridor is actually one along which there are already existing overhead power lines and their support towers? Is this not one of the considerations for possibly recommending this to be the preferred line? Is not hiding the bushel under a haystack being mildly perverse, even at this early stage of the report?<br><br>I appreciate that this Appendix deals with the heritage factor for the recommended route, not its visual appearance. However, it presumably cannot be discounted at this stage that using a route along which overhead transmission line towers are already present | Mike Longden-Thorgood – NACA (National Association of Clean Air) & Institute for Nuclear Engineers, comments by e-mail, 14 February 2008 | Comment noted. |

| Issue | Raised by | Response |
|---|---|---|
| offers a strong weighting factor to be taken into account when recommending a preferred route.<br><br>On some scaling table with various factors, weighting numbers may need to be applied, including both visual and heritage considerations. We have a special case here, with relatively tall towers presenting a marked visual appearance, which cannot be satisfactorily dealt with purely on heritage factors, taken in isolation. | | |
| A question was raised at the Koeberg meeting about the proposed 60 metre exhaust stack. A response indicated that this might possibly be reduced in height.<br><br>I raised the point during the visit to the Ankerlig power station that, because the temperature of the exhaust gases from a CCGT will be considerably lower than from the OCGT then, with a lower stack height, the lower temperature gases will be more dense, and will not rise so far from a lower stack, unless power was to be used to force the gases up the lower stack with a considerably increased velocity. Surely that would be a waste of power when, presumably, the 60 metre stack has been chosen to take the gases from the turbines to what has been judged to be an acceptable exit velocity from the stack, relying on their reduced density to self-raise them up the stack and to a safe height above it before being generally moved horizontally by the wind, and then dispersed, eventually looping and reaching the ground, hopefully beyond Atlantis in SW winds.<br><br>However, the best of man's intentions can be clobbered by low inversions. (Interestingly, there used to | Mike Longden-Thorgood – NACA (National Association of Clean Air) & Institute for Nuclear Engineers, comments by e-mail, 14 February 2008 | Comment noted. A height of 60 meters will be used for modelling purposes. These modelling results will inform the final design and height of the HRSG stacks. The height of the inversion layer would also be taken into consideration.<br><br>Eskom's coal-fired power stations on the Mpumalanga Highveld also have stack heights of between 220 – 250 m. The primary reason for this is the relatively higher inversion layer during winter months |

| Issue | Raised by | Response |
|---|---|---|
| be a coal fired power station on the main road approaching Preston in Lancashire, England, from Warrington which, in order for the exhaust gases to be discharged above the relatively frequent winter inversions, was at least 200 metres high. No joke. I understand that the exhaust stacks at the Sasol Secunda plant are 200 metres high, with any pollution eventually looping to ground level over a distance of about 30 km). | | |
| ***City of Cape Town's Proposed Regional Waste Site*** | | |
| Asked about the City of Cape Town (CoCT) Regional Landfill site and reported that the CoCT is also extending their Atlantis dumping site. He enquired whether this is part of the EIA conducted by Eskom since the Eskom project is closely situated to the CoCT waste disposal site. | Raymond Williamson, KSW Koeberg Visitor Centre, 13 February 2008 | This project is only concerned with the power station conversion and transmission integration. The landfill site has been considered as a planned land use in the scoping of the transmission line routes. The CoCT will engage in their own EIA process regarding the landfill site. |
| Concerned with the reply since the CoCT provided them with exactly the same reply. He also mentioned that he was concerned that the organisations have blinkers on and that the community have very strong feelings about regional landfill site issues. | Raymond Williamson, KSW Koeberg Visitor Centre, 13 February 2008 | Other developments in the area include the landfill site and the expansion of the Apollo brick factory and these are all separate processes from the current Ankerlig Conversion and Transmission Integration EIA study. |
| **Visual Impact** | | |
| Visual Impact: It is unclear from the current information to gauge how wide the 60m high towers will be and therefore difficult to assess their impact on the skyline. The visual impact assessment should therefore include a scaled elevation of the 60m high smoke stacks which illustrate the said stacks in relation to the existing 30m tall structures. | Pat Titmus, Head Environment and Heritage Management, City of Cape Town, Blaauwberg Administration, comment by fax and e-mail, 19 February 2008 | Comments noted. |
| **Social Impact Assessment** | | |
| Social Impact Assessment: Currently the only listed risk related to the increased fuel transportation seems to be increased traffic. The Social Impact Assessment must | Pat Titmus, Head Environment and Heritage Management, City of Cape Town, Blaauwberg | Comment noted. |

| Issue | Raised by | Response |
|---|---|---|
| include the risk of transporting the extra fuel related to the CCGT. The 'new figures' in terms of this impact must reconciled with the studies that was suppose to have been undertaken with regard to the original OCGT EIA study. | Administration, comment by fax and e-mail, 19 February 2008 | |
| ***Biodiversity*** | | |
| Biodiversity off-set: The Botanical Assessment (Nick Helme, letter dd 14 January 2008) concluded, amongst other, that:<br>' …*It should be noted that some sort of biodiversity offset is likely to be recommended at the Impact Assessment stage in order to compensate for the unavoidable loss of existing biodiversity and habitat (Endangered vegetation type) on the site. This would be in addition to the standard basic mitigation such as Search and Rescue or various species…"*<br><br>However, the above is not included in Table 9.1: *Summary of the issues that which require further investigation within the EIA phase and activities to be undertaken in order to assess the significance of these potential impacts* (page 128). Kindly include the same to ensure that the Botanical Assessment identify suitable bio-diversity offset projects (e.g. expansion of the Blaauwberg Conservation Area) during the EIA phase.<br><br>Eskom's response, during our 21 November 2007 meeting, to bio-diversity offset relating to this activity is that Eskom have established various environmental offset and ecological corridors along the national grid. However, the opinion is strongly held that an offset should be implemented locally. This, aforementioned opinion, is | Pat Titmuss, Head Environment and Heritage Management, City of Cape Town, Blaauwberg Administration, comment by fax and e-mail, 19 February 2008 | Comment noted. However, it must be noted that the proposed development site has already been disturbed through previous construction work and as a result of alien plant infestation. The specialist report alludes to the possibility of off-sets being potentially required. However, the need for this will only be confirmed through the specialist study in the EIA phase and will depend on the condition of the vegetation which will be lost due to the establishment of the additional fuel storage area.<br><br>It must be noted that each project will have to individually assess the potential for biodiversity off-sets, and as such, no single project should be expected to compensate for unrealised biodiversity off-sets on other projects in the same area. |

| Issue | Raised by | Response |
|---|---|---|
| further strengthened by the fact that the other three proposed Eskom developments on Cape Farm 34 [i.e. New Training Complex (E12/12/20/997), Additional nuclear station (E12/12/20/944) and the Pebble Bed Reactor] will cumulatively lead to significant loss of Cape Flats Dune Strandveld.<br><br>It is worthy to note that a similar bio-diversity offset recommendation, to be implemented locally, was made during the assessment processes of the OCGT units. At that stage biodiversity-offset relating to the loss of endangered vegetation type on the site, measuring 20ha, where recommended at a ration of 1:4. Yet the recommendation never translated into the Environmental Authorization. The opinion is held that this said bio-diversity off-set should now be formalized. | | |
| ***Independent Power Producers*** | | |
| Indicated that it was difficult to understand why Eskom provided 70% energy to South Africa while independent sources 30%. He remarked that this was not a new statement and he wondered how the independent suppliers were to enter the market to supply energy. | Raymond Williamson, KSW Koeberg Visitor Centre, 13 February 2008 | Comment noted. Independent power producers will enter the market over a period of time. The DME has created the environment to enter the market to produce the 30% of energy in the future. DME is looking at bringing in new producers. Overall regulation of energy suply is undertaken by the National Energy Regulator. The intention is that the independent power producers sell their power to Eskom who transmit and distribute it to consumers.<br><br>Agreements with independent power producers (IPP) are currently being finalised by the DME to establish, own and operate generation plant, and that an Environmental Authorisation has been issued for the IPP plant in Kwazulu-Natal. A power purchase |

| Issue | Raised by | Response |
|---|---|---|
| | | agreement will be established between Eskom and the IPP. |
| ***Total Footprint*** | | |
| Indictaed that he was confused about Eskom's planning of the project. He raised a concern that people cannot get an overall view of what is being planned by Eskom. He asked whether the new units are an addition to the existing power station and whether there will be enough space to add the new units. | Hans Linde, KSW Koeberg Visitor Centre, 13 February 2008 | There is enough space on the existing power station site to accommodate the CCGT units. Eskom purchased sufficient land upfront for the potential conversion of the OCGTs to CCGTs. This was done as part of Eskom's land use planning for the Ankerlig site. |
| Requested clarity regarding the total power to be generated from the 9 units. | Mike Yeoll, KSW Koeberg Visitor Centre, 13 February 2008 | The existing and authorised OCGT units (9 in total) can generate 1350 MW. The converted units can generate an additional 720 MW. There is therefore the potential that the power station can generate a maximum of 2070 MW.<br><br>It is important to note that Eskom has applied for the conversion of all nine units at Ankerlig. |
| ***Specialist Studies*** | | |
| Asked that the specialist studies go to the DEAT and that Eskom and Savannah should ensure that these reach DEAT in time for a record of decision. | Hans Linde, KSW Koeberg Visitor Centre, 13 February 2008 | A copy of the draft scoping report has been submitted to Western Cape Ai Quality Directorate as well as to the National Air Quality Directorate. |
| ***Decommissioning of Power Stations*** | | |
| Mentioned that he was concerned about the rate that older power stations would be decommissioned and that by 2025 there would not be sufficient capacity to meet the demand. He indicated that 2025 was only 17 years away. | Mike Yeoll, KSW Koeberg Visitor Centre, 13 February 2008 | As power stations are decommissioned new ones are currently being built to meet future needs. He used the Eskom funnel to illustrate which projects are currently being investigated and built to meet future needs (e.g. Return-to-Service of moth-balled power stations; construction of Medupi Power Station). |
| Asked that if it takes 10 years for coal fired power station to be built, how long will it take for the building of nuclear power stations? | Mike Yeoll, KSW Koeberg Visitor Centre, 13 February 2008 | Both coal fired and nuclear power stations take longer to construct than gas fired power stations, and can take from 8-10 years. Gas fired units such as Ankerlig and Gourikwa take on average 18 months to |

| Issue | Raised by | Response |
|---|---|---|
| | | complete. These units could assist in meeting national needs whilst new coal and nuclear units are being built. |
| Some economists have argued that the power outages have caused the country at least 2% of its GDP per month. | Mike Yeoll, KSW Koeberg Visitor Centre, 13 February 2008 | Comment noted. |
| ***Omega Substation*** | | |
| Referred to meetings that he attended in 1992 and the indication at these meetings of Eskom's intention to establish the Omega substation. He questioned the delay in developments as this has been in progress for a long time. | Mike R Longden-Thurgood, KSW Koeberg Visistor Centre, 13 February 2008 | The Omega substation will be constructed by end 2009. He added that a 765 kV transmission line from the De Aar area is currently under construction and will feed into this substation. |
| Referred to the electricity situation over the past 12-15 months in South Africa and asked how many EIA processes are in progress, and what else was being considered to bringing more power to the Western Cape. | Mike R Longden-Thurgood, KSW Koeberg Visistor Centre, 13 February 2008 | A number of initiatives are underway nationally to ensure the entire country has sufficient power. Albert explained that a new 765 kV transmission line from the De Aar area (Hydra Substation) would be bringing power down to the Cape. |
| Indicated that he was concerned about the losses of electricity over the long distance that it had to be transmitted (i.e. from Mpumalanga). | Mike R Longden-Thurgood, KSW Koeberg Visistor Centre, 13 February 2008 | The best way to eliminate the losses Mike was referring to was to generate power in the Western Cape instead of importing it. |
| Indicated that the farm Olifantskop had been in his family for many generations. He indicated that there is a pine forest on the property which was planted by his family. He asked whether this plantation would be affected by the Omega Substation. | Nico Stoffberg, owner Vaatjie Farm, KSW Koeberg Visitor Centre, 13 February, 2008 | The Omega Substation has already been authorised and is not part of the scope of this study. Therefore, it cannot be said with certainty as to whether these trees will be affected or not. |
| ***Labour Concerns*** | | |
| Asked how many local jobs the Ankerlig Conversion project would provide. He further explained that he was not happy with Eskom using labour brokers which cause conflict in the community. | Adolf Markus, PM, Rebecca Van Amsterdam Hall, 13 February 2008 | Approximately 500 community members were involved in the building of the initial OCGT units and that the situation is similar for the Gas 1 units currently under construction. Eskom is aware of the situation with the labour brokers but that it is unlikely that Eskom would employ people directly. |

| Issue | Raised by | Response |
|---|---|---|
| Asked why Eskom would only use 'big' security companies to provide security at its facilities. He pointed out that smaller security companies do exist in Atlantis and that they could equally provide a service to Eskom. | Adolf Markus, PM, Rebecca Van Amsterdam Hall, 13 February 2008 | Eskom uses a tender process for all contractors as matter of policy. Eskom facilities are National Key Points and that all security staff and companies used need to comply with the highest standards and are required to have specialised training to provide the type of security required at its facilities. |
| Noted that Koeberg have instructors to train people. He suggested that the community be considered to be trained. | Adolf Markus, PM, Rebecca Van Amsterdam Hall, 13 February 2008 | Comment noted. |
| ***Transportation of Fuel*** | | |
| Confirmed his understanding that in terms of the transportation of fuel, that a separate EIA process is being done by Bohlweki. | Raymond Williamson, KSW Koeberg Visitor Centre, 13 February 2008 | The fuel transportation EIA study is being done by a separated team of consultants who would be engaging stakeholders. |
| Raised the issue of transportation of fuel. She indicated that if Eskom understands that diesel is expensive, the logical action would be to choose a cheaper fuel option. Heather requested the contact details of the consultants who were doing the fuel transport EIA study. She also asked for information on the nearest rail point. | Heather Brenner, KSW Koeberg Visistor Centre, 13 February 2008 | The nearest rail point was just to the east of the Ankerlig Power Station site.<br><br>Nico indicated that Heather's details will be forwarded to the consultants conducting the fuel transport EIA. |
| He asked whether Eskom would use the Cape Town harbour pipeline or whether there is a need to install a new fuel pipeline from Cape Town harbour. | Hans Linde, KSW Koeberg Visitor Centre, 13 February 2008 | The fuel transportation EIA will focus on all aspects of getting fuel to site. There is an existing harbour pipeline. However, the existing capacity might not be sufficient which may necessitate the construction of a new pipeline. |
| Asked for clarity as to why diesel was chosen when it is so expensive. | Heather Brenner, KSW Koeberg Visistor Centre, 13 February 2008 | To some extent diesel is almost the only option. Although the units can operate on natural gas and Liquefied Natural Gas (LNG), the availability of these resources is limited at present. In addition expensive infrastructure is required to be associated with these options.<br><br>In terms of planning a few years ago the anticipated |

| Issue | Raised by | Response |
|---|---|---|
| | | load growth was much lower than the actual recently experienced. In view of the higher than anticipated load growth Eskom recognises that adjustments are required to cater for the additional demand, especially in the medium term. Gas turbine power stations can be implemented much faster than coal fired or nuclear power stations to meet the medium term national energy needs. |
| Requested that Eskom maintain excellent standards by only importing the best quality diesel fuel for energy production. | Hans Linde, KSW Koeberg Visitor Centre, 13 February 2008 | Comment noted. |
| ***Fuel Volumes*** | | |
| Enquired about the amount of fuel being used and the sulphur content in the fuel. He wanted to know how much fuel the 9 units would use. | Mike Yeoll, KSW Koeberg Visitor Centre, 13 February 2008 | The production of 3000 GW hours per annum with combined cycle gas turbines will require approximately 580 million litres of diesel. |
| He remarked that this amounts to $94 per barrel. He said that it was a bit difficult to calculate the cost of generation to the user. He added that the commodity is unreliable and asked what the cost of operation of the gas power station is compared to coal and nuclear. | Mike Yeoll, KSW Koeberg Visitor Centre, 13 February 2008 | If the conversion of the OCGT to CCGT occurs, the power station must run continually for more than 3 hours per day for the benefit of the steam cycle to materialise (i.e. the conversion). The project will only be implemented if needed. While there are other options available, the national electricity situation demands that all options be used to meet the national energy needs. The conversion of the Ankerlig Power Station is currently one option which is being used to assist in meeting the energy needs. Up to the point where sufficient power can be supplied from other sources (such as new coal fired power stations), the use of the CCGT power station will be used for meeting the mid-merit electricity requirements. |
| Asked if Eskom would be considering natural gas to fuel the Ankerlig power station. | Mike Yeoll, KSW Koeberg Visitor Centre, 13 February 2008 | It is important that the project be expedited. Eskom is still looking at acquiring an LNG or using natural gas. These options would require expensive |

| Issue | Raised by | Response |
|---|---|---|
| | | infrastructure to be constructed such as a pipeline from the gas fields. The cost of this infrastructure must still be investigated and must be able to be recovered over the life of the project. |
| He asked about the capacity of the new fuel storage units. | Tyron Williams, Dassenberg Residents and Ratepayers Association, PM, Rebecca Van Amsterdam Hall, 13 February 2008 | The storage units could contain ~2,7 mega litre each. Additional storage could hold ~41 million litres. |
| ***Process*** | | |
| Wanted to know how the community was informed about the public participation process for the Ankerlig Conversion and transmission integration project. | Adolf Markus, PM, Rebecca Van Amsterdam Hall, 13 February 2008 | Adetailed process has been followed with the local Atlantis community. A series of focus group meetings with different community based organisations was held in Atlantis during the scoping process. The community was invited through the local media, posters at public venues like the local libraries and invites to all stakeholder registered on the study database. |
| **Demand Management** | | |
| Indicated that he cannot understand why Atlantis should still face power outages while it has Ankerlig on its doorstep. | Adolf Markus, PM, Rebecca Van Amsterdam Hall, 13 February 2008 | The whole country is faced with the same challenge of the power outages and load shedding needs to occur on a national basis.<br><br>If the power station alone is used to supply electricity to Atlantis, electricity would be 4 – 10 times more expensive than is currently the case. In addition, the community would only have power for 2 hours a day as this is how long the power station is operational for. |
| ***Emissions*** | | |
| Asked if the conversion would change the gas emissions from the power station. | Tyron Williams, Dassenberg Residents and Ratepayers Association, PM, Rebecca Van | The steam turbines to be added onto the existing power station would only absorb the heat emitted from the OCGT units. The gas emission make-up |

| Issue | Raised by | Response |
|---|---|---|
| | Amsterdam Hall, 13 February 2008 | would be essentially the same as the current situation. The temperature of the gas emitted would however be lower. |
| Asked whether the speed of the emissions would be lower and whether there would be an impact on the surrounding community. | Tyron Williams, Dassenberg Residents and Ratepayers Association, PM, Rebecca Van Amsterdam Hall, 13 February 2008 | The specialist studies undertaken would be considering all emissions from the power station and would need to determine whether there would be any impact on the surrounding community. This specialist study would inform the stack height which is required in order to minimise any impacts on the surrounding community. |
| Expressed his concern about emissions and noise levels that come from the plant. He indicated that the issues of noise and emissions need to be focussed on in the specialist studies and that the community and Eskom need to obtain finality about these issues. | Tyron Williams, Dassenberg Residents and Ratepayers Association, PM, Rebecca Van Amsterdam Hall, 13 February 2008 | The air quality and noise specialist studies would have to deal with the concerns raised by local stakeholders during the study and indicated how impacts could be mitigated. |
| **Oil Separation Dam** | | |
| Wanted to know how the oil separation dam at Ankerlig works. | Adolf Markus, PM, Rebecca Van Amsterdam Hall, 13 February 2008 | Te area would not be polluted and that the dam is concrete lined and sealed. All dirty water from the power station site is collected and diverted into the dam. The site of the Gas 1 expansion will also have an oil separation dam. |

**CAPE METROPOLITAN INVESTMENTS 006 (Pty) Ltd**
26 Sandpiper Crescent, Flamingo Vlei, Table View 7441 P.O. Box 1459, Milnerton, 7435
Registration No: 2006/005561/07 Tel (021) 556-6387 Fax (021) 556-6387 e-mail : CMI@metroweb.co.za

21 February 2008

Mr. S. W. Johston
Sustainable Futures ZA
PO Box 749,
Rondebosch,
Cape Town, 7701

PER FAX : 086 510 2537
PER E-MAIL : swjohnston@mweb.co.za

**ATTENTION : Mr. Shawn Johnston**

Dear Sir,

**NOTIFICATION OF CONCERNS, COMMENTS AND PREFERENCES ON THE PROPOSED 400 Kv TRANSMISSION POWER LINE AND THE SELECTION OF THE CORRIDORS OF ALIGNMENT BETWEEN ANKERLIG POWER STATION AND OMEGA SUB-STATION.**

We, Cape Metropolitan Investments 006 (Pty) Ltd [CMI] have registered as an Affected Party within the EIA Process, and would like to hereby advise that we hereby formally submit our concern with regard to the proposed 400Kv Transmission Power Line Corridor alignment from Ankerlig Power Station to Omega Sub-station over Farm Groot Oliphantskop 81.

Firstly, we would like to categorically state that it is not the intention of CMI to be obstructive with regard to the establishment of the proposed Atlantis Power Station Conversion and Transmission Integration Project, and that it remains our objective to collaborate and participate in all matters with the EIA Team and Eskom in order to resolve the best possible alternative or solution in this matter.

Secondly, that no detail or information was withheld from Eskom, its Environmental Consultant, the National Department of Environment & Tourism (DEAT), PAWC Department Environment, Planning and Economic Development (DEPED), and that the primary elements and motivation of our concerns were not ready or available to share with or offer in any formal manner, for instance via the IDP process of Cape Town, to the above parties before, and that the principal parties involved have only been informed of the proposed Atlantis Power Station Conversion and Transmission Integration Project recently, as it would not have been relevant to the principal parties during any previous public notification and consultation processes.

Thirdly, we acknowledge that neither Eskom, its Environmental Consultant or for that matter, the DEAT or PAWC DEPED, could have been aware or informed of the nature, details and/or specifics that forms the basis of our concerns when the project was registered.

Fourthly, we fully accept that this letter of notification does not in any way obviate the need for CMI and its consortium to make a separate formal submission of its proposed development initiative to Eskom its Environmental Consultant and the National Department of Environment & Tourism, the City of Cape Town as well as to the PAWC Department of Environment, Planning and Economic Development, as a matter of urgency at a future date.

Fifthly, the purpose of our notification merely serves to request the indulgence from Eskom and its Environmental Consultant to receive and study the new facts and pertinent details, and to re-evaluate the specific alignment of the power line corridor with due consideration of the practical, safety, and physical impact and conflict which it may have seen against the proposed CMI development and it's strategic, socio-economic, tourism, growth and public infrastructure significance for the Greater Cape Town Metropolitan Area, the total West Coast Region and for the broader Western Cape Province.

Sixthly, at our formal presentation and submission of the proposed alternative land use for the area, that includes Farm Groot Oliphantskop 81, to the Head of Department of Environment, Planning and Economic Development, Mr. Theo Tolmay, as well as Mr. Rudi Ellis, on 13 August 2007, the proposed alternative land use as presented by CMI, was viewed as an essential and highly strategic benefit to the area that would encapsulate and address many needs, issues and requirements for the area with direct and indirect benefits for the Greater Cape Town Metropolitan Area and Western Province, which promises to be of great significance and positive impact.

The basic elements and specifics pertaining to the concerns and preferences by CMI can be summarized as follow:

## 1. AFFECTED PARTY's DETAILS :

The Affected Parties in the matter of the concerns and preferences are represented by Cape Metropolitan Investments 006 (Pty) Ltd, which is a new Special Purpose Vehicle (SPV) private company that was established for the proposed development of the CapeWest International Airport & Gateway Park, and which manages and protects the interest of a consortium consisting of the following parties :

CapeWest Holdings (Pty) Ltd
African Renaissance Holdings Ltd
SA Grand Prix Corporation ( Pty) Ltd
Rainbow Nation Property Trust
Nationbuild Property Investments (Pty) Ltd
M-G8 (Pty) Ltd
(As well as a consortium formed by Nedbank, Old Mutual and/or MacQuarie Bank)

The Affected Party's Information is as follow :

a. Company = "Cape Metropolitan Investments 006 (Pty) Ltd
b. Registration Number = 2006/005561/07
c. Address = P.O. Box 1459, Milnerton, 7435
d. Phone No. = 021-556 7670
e. Cell No. = 082 883 2045
f. Fax No. = 021-556 6387

## 2. GROUNDS OF CONCERN

The primary purpose of the concern with regard to the Atlantis Power Station Conversion and Transmission Integration Project is the potential corridor alignments "B" and "C" of the transmission power lines, and therefore its potential negative impact and subsequent loss of strategic, socio-economic, tourism, growth and public infrastructure and investment, with a variety of multiplier benefits for the surrounding communities and broader public of Cape Town, if and in the event of the identified development land being excluded from or effectively being subdivided from the proposed future land uses and thereafter being unavailable or physically "split" in any way that could encumber the future proposed strategic development, based on the following grounds :-

2.1 The specific and relevant land portions for the "B" and "C" alternative alignment corridors for the transmission power lines, are earmarked for inclusion in a larger development precinct for a new alternative international passenger and cargo airport for Cape Town.

2.2 CMI is in the process of negotiation with the current owners of these portions, as well as with the surrounding owners of farms and portions, to purchase these farms and portions, and to include it in the new to be consolidated project site that is planned to accommodate the two main runways for the airport.

2.3 The independent search of flat land outside built-up urban areas with adequate potential bulk infrastructure as well as regional and metropolitan accessibility has identified this area of combined farms and portions as the most suitable, viable, practical and functional of all potential locations around the Greater Cape Town Metropolitan Area for a new secondary international airport.

2.4 The primary project finance for the land acquisitions, precinct infrastructure, basic airport runways and infrastructure as well as the essential international aviation facilities and amenities has received the in principle commitment from large national and international funding institutions, which funding is conditional to CMI securing all of the key farms and portions, and which significant infrastructure investment would be lost for the Province if the earmarked farms and land portions for the airport development are encumbered in any manner that would make the airport configuration impossible.

2.5 The initial development phases of the CapeWest International Airport is dependent on extending the existing Delta 2000 airfield on the adjacent farm, being Portion 6 of Farm Brakkefontein No. 32, and which extension can only take place in a southern direction over Portion 1 of Farm Brakkefontein No. 32, this being due to the military ownership (SAW) as well as the land being more undulated towards the north.

2.6 The Rural Management Framework for the City of Cape Town identifies the area south of Atlantis (where the Atlantis International Airport is being proposed) as a Rural Management Area to accommodate urban infrastructure and space extensive uses, which logically includes infrastructure and large space uses like an airport that should serve the more urbanized Greater Cape Town Metropolitan Area.

2.7 The proposed runways and aircraft movement areas within the larger development precinct for the CapeWest International Airport falls within the 5km Precautionary Action Zone (PAZ) of the Koeberg Nuclear Power Station. This has already effectively neutralized and sterilized Portion 1 of Farm Brakkefontein No. 32 and those farms and portions earmarked for the runways and aircraft movement, for any future human habitat or community facilities. In terms of Government Notice No. 287 of 5 March 2004 published under Government Gazette No. 26121, and Regulations in terms of Section 38(4), read with Section 47, of the National Nuclear Regulator Act (Act No. 47 of 1999) on the development surrounding any nuclear installation to ensure the effective implementation of any nuclear emergency plan, as well as the Koeberg Nuclear Emergency Plan (current version approved by the NNR in terms of section 38(1) of the NNR Act), it is recognized, as per international codes and guidelines, that an airport can function as a major contribution as "Disaster Management Infrastructure" in the event of a nuclear disaster.

2.8 In the event of compromising the inclusion of any of these earmarked farms and portions, and effectively excluding it from the larger CapeWest International Airport development precinct, the proposed new runways will be interrupted and the airport will only achieve a Class 2B aerodrome status, with a maximum runway length of 1,200m for aircraft with a wingspan up to 24m. The requirement is for a 4E aerodrome status with a 4,5km runway that can accommodate aircraft with wingspans larger than 36m and up to the A380 Airbus.

2.9 If either of the transmission power line alternatives ("B" or "C") should still go ahead, notwithstanding all of the above, and if the CapeWest International Airport should under great duress and compromise be reconfigured and re-planned around these power lines, it will be an unwelcome eyesore and tourism disaster, having the potential for an international embarrassment for the City of Cape Town and for the Western Cape Province.

2.10 The proposed CapeWest International Airport would, by preliminary estimations create more than 2,000 permanent job opportunities, while the proposed CapeWest Gateway Park would have the capacity to create more than 26,000 permanent jobs, which could potentially include a further 30,000 direct and indirect job opportunities with the future establishment of the Atlantis FTZ Area and Atlantis Industrial Redevelopment Zone (AIRZ), which will all be lost for the Atlantis Township and other surrounding communities.

2.11 The key strategic objective of using the CapeWest International Airport & Gateway Park as a catalyst for socio-economic up-liftment, the initiative to cross-subsidize urgent urban infrastructure as well as the plan for a "District Urban Renewal Program" for the Atlantis Industrial Area and the Atlantis Township, to be incorporated in a total sub-regional "Central Improvement District" is the first realistic and viable initiative to address the historical disparities and disadvantages from the Apartheid Legacy that is still suppressing and distressing the communities of Atlantis. It will be a

great catastrophe if this unique intervention and progressive opportunity is lost forever due to the establishment of the either of the alternatives "B" or "C", which both could prohibit the development of a proper international class airport.

## 3 AIRPORT DEVELOPMENT MOTIVATION (Confidential)

**CapeWest International Airport is proposed as a new international passenger and cargo airport for the Western Cape. It is not intended to compete with the Cape Town International Airport (CTIA), but rather to augment and complement it functionally with the unprecedented growth in the budget aviation carrier, executive and corporate jet, private aircraft as well as in the import / export cargo airfreight markets.**

**The ancillary land uses and development strategies aims to stimulate large regional growth with economic and social up-liftment for the West Coast and North-Western Metro including the historically marginalized communities of Atlantis and surrounding hinterland.**

**Further powerful development initiatives for integrated development with the airport currently under consideration could potentially include the establishment of a new Western Cape Free Trade Zone (FTZ).**

It is provisionally earmarked to be developed on an existing private airfield for light aircraft, called Delta 2000, dating from the late 1980's, strategically situated between Melkbos and Atlantis, directly outside the north-western "urban edge" of the Greater Cape Town Metropolitan Area, between the R27 West Coast Road and the N7, approximately 30 km from the Central Business District of Cape Town.

It becomes even more evident when the strict spatial distance regulations between airfields are taken into consideration. Airfields must be more than 25km apart to avoid each other's airspace. This makes it impossible to create another airfield in close proximity to the Cape Town International Airport without going to the great expense of creating a single airspace.

The Cape Town International Airport is close to its maximum capacity, with the passenger airport generally overcrowded and the cargo area unable to accommodate the growth over the last decade, often needing to divert aircraft during technical or weather problems. The current program of refurbishments and extensions will not address the overcrowding beyond 5 years and does not include any major upgrades for the cargo or executive aviation growth.

The escalating growth in the regional, national, continental and international aviation activity is broadly studied, and is predicted to exceed 8,5% p.a. for passenger travel and 6% p.a. for cargo airfreight, causing a doubling of all existing aviation activities in the next 10 – 12 years.

With the advent of the new generation of "super-jets" like the Airbus A380 and Boeing 747-400F, the international nations have already placed over 22,000 new aircraft

orders, thereby predicting a continuous pressure on all airport infrastructure, accommodation and facilities. With most of the predicted growth in budget travel, with a higher incidence of arrivals and departures, increasing the focus on cost effectiveness and service value, most airports, i.e. Cape Town International Airport, will not able to cope or compete.

The fact that Cape Town International Airport is not currently able to receive the popular tourist orientated 590-tonne Airbus A380 or the renowned 600-tonne Antenov An-225 cargo aircraft, creates a strategic need as well as a major opportunity.

With the significance of Cape Town as a tourism and increasingly also as a business, leisure, sport, cultural and conferencing destination, it is inevitable for the region to establish a second commercial passenger and cargo airport to cater for the future demand.

There have been various studies and initiatives over the past years to establish a second large airport in the vicinity of Cape Town, especially in the wave of progress that surrounds the 2010 Soccer World Cup:

- The Ysterplaat Airforce Base is excluded from redevelopment or commercialization due to its strategic military purpose and its proximity to the established urban areas.
- The Fiesantekraal Airport is limited by its physical and topographical constraints and its current redevelopment direction is for smaller to medium sized planes, dedicated tourism services, private planes and helicopters, hanger storage and then the continued recreational flying.
- The new proposal at Malmesbury, Good Hope International Airport, is well researched and formulated, but might prove to be too secluded and distant (50km) from the Greater Cape Town Metropolitan Area, falling within a consistent winter mist belt, with limited commercial cross-subsidization possibilities.

From a wider investigation conducted by industry experts, including ACSA and Lanseria International Airport Company / Execujet, it has become evident that it would be extremely difficult to find an alternative site location for a new airport that would be suitable from a size, topographical, accessibility and infrastructure perspective within the proximity of the broader Cape Town demographical area, which would still lend itself to be both practical and economically sustainable.

This is where the unique attributes of the proposed CapeWest International Airport can supersede all expectations as it is proposed within a site location that has been overlooked or ignored due to the proximity of the Koeberg Nuclear Power Station, which has effectively neutralized the surrounding area for most other forms of urban development.

The proposed CapeWest International Airport presents no significant noise disturbance to the urban areas to the south or to the rural areas to the north, as the distance of the localities of these areas are outside of the typical flight paths and most incoming and outgoing aircraft uses north-western approach / departure directions. It must be

mentioned that the overall noise pollution emitted during a typical 24 hour period from the nearby roads are collectively more severe and regular than the proposed airport.

It is important that Atlantis and the surrounding sub-region should not be allowed to deteriorate into a "poverty trap", and to become more unpopular for development and economic growth (which is presently the situation). Steps should be taken to revitalize its popularity for small to medium enterprises, industrial and commercial development, human settlements, and other symbiotic land uses with associated energies. It is always difficult to "export" wealth to where it is needed and the public sector, statutory authorities as well as the private sector including the business and commerce communities could capitalize on the opportunities presented.

CAPEWEST INTERNATIONAL AIRPORT & GATEWAY PARK offers many firsts for the region, while also having unique strategic benefits for the multitude of future developers, financiers, owners, tenants, visitors, shoppers, employees and the broader communities of the Cape as follows :

- New, holistic, modern and progressive development
- Scale and impact can compete with other venues
- Measures up to international smart airport trends
- Establishes a significant regional transport node
- Achieves both travel and leisure quantity in parallel
- Re-introduces the Boland and Cape Town to the travel grid
- Celebrates and honours regional qualities and character
- Caters for growing business and tourism interest in the region
- Satisfies regional travel and leisure aspirations
- Offers variety, quality and value to discerning customers
- Inspires major national interests and commitments
- Attracts local and international investors and owners
- Qualifies for institutional and/or private syndicated investments, gearing and lending
- Stimulates a progressive and accelerating development programme over market driven phases
- Generates and formalises wide employment opportunities

**CAPEWEST INTERNATIONAL AIRPORT & GATEWAY PARK will establish an icon node and multi-faceted attraction in the Western Cape for the discerning business traveler and international tourist, selective golfer, health and leisure disciple, wine enthusiast, nature and adventure seeker or as a dedicated shopper, occasional visitor and dedicated tourist, aimed specifically at the majority of the people of the Cape Metro, Boland, Cape Hinterland and to a certain degree to the national and international tourist market.**

The future urbanization of the Greater Cape Town Metropolitan Area is predicted by Stats SA to double its population by 2014, indicating enormous pressure on the suburban growth of all areas, with the accent on the Cape Flats and secondly on the North-West Corridor.

The METROPOLITAN SPATIAL DEVELOPMENT FRAMEWORK (MSDF) of the Cape Metropolitan Council guides the form and location of physical development in the Cape Metropolitan region on a metropolitan scale. The framework is based on a defined vision of a well managed, integrated, metropolitan region in which development is intensified, integrated and sprawl-contained. The importance of the MSDF is that it inter alia provides direction for physical growth at metropolitan scale. In order to achieve this certain structuring urban elements like metropolitan urban nodes and activity corridors/spines have been identified. The most important long term urban growth direction of the metropole is along Koeberg Road through Table View, Parklands along the existing railway line in a northerly direction to the Metropolitan node of ATLANTIS. The proposed CAPEWEST INTERNATIONAL AIRPORT and GATEWAY PARK becomes an important building block of this metropolitan activity spine of the MSDF.

***The location of CAPEWEST INTERNATIONAL AIRPORT & GATEWAY PARK is superb, offering a very good micro and macro location. This should be utilised and the development should focus on the needs of the market and the growing level of air travel and more upper income mobility. This market is showing rapid growth and will continue for at least the next 10 years. All this makes it a good opportunity for development in the next 3 – 5 years.***

**CAPEWEST INTERNATIONAL AIRPORT & GATEWAY PARK, including the physical and virtual environment, is directed to the total demographic of the Greater Cape Town Metropolitan Area. This is made possible by way of its unique combination and integration of the various mixed uses, powerful destinational tendencies and speciality themes, as well as its significance for the region from an accessibility, value, variety, entertainment, tourism and leisure relevance.**

In the broader context, it is proposed for the CAPEWEST INTERNATIONAL AIRPORT & GATEWAY PARK layout and configuration to be incorporated into a 3,000 hectare consolidated farm district, which will be locked into a semi-urbanised townscape as inspired by the surrounding urban fabric, with views to the mountains, vistas over the typical Boland landscapes, improving accessibility and connection with the N7, utilising the topography of the site and maximising the climatic orientations.

A preliminary services report for CAPEWEST INTERNATIONAL AIRPORT & GATEWAY PARK was prepared by leading South African professional firms and experts. It concluded that there are no insurmountable problems prohibiting the provision of engineering services. Preliminary designs and cost estimates were carried out and will be refined after further discussions with relevant authorities and parties. It will be the Master Developer's responsibility to provide all internal and external services for the development, as well as the aviation infrastructure, environmental infrastructure, landscaping and features while the individual developments, commercial infrastructure, retail and hospitality facilities as well as proposed industrial parks, FTZ and IDZ etc. will be opened by proposal call, invitation and/or tender to sub-developers and contractors.

The involvement of the public in the planning and successful implementation of a project of this magnitude is vital. A series of public meetings, press releases, official notices,

and advertisements in the newspapers will have to be conducted and carried out since the nature of the development touches on many aspects and issues. Every effort will therefore be made to keep the public fully informed of the development.

**An essential component and key strategic objective of the CAPEWEST INTERNATIONAL AIRPORT & GATEWAY PARK, is to establish an "Urban District Renewal Program" that would incorporate the existing Atlantis Industrial Area and directly benefit the Atlantis Township through a coordinated initiative for a "Central Improvement District" (CID) for the total area.**

## 4. SPECIFICS, FACTS AND REFERENCE DOCUMENTATION

For further detail information and specifics, the "CapeWest International Airport – Executive Presentation" would be available to Eskom and its Environmental Consultant, subject to the standard confidentiality and non-circumvention agreements being signed, and offers a broader discussion of the provisional development aspects and serves as a further clarification and motivation for the concerns with regards to the "B" and "C" corridor alignments, as well as justification for the alternative un-encumbered land use over the relevant farms and portions for the proposed regional development of a secondary international airport for Cape Town at this specific location.

The preliminary mapping diagram indicating the early concept designs included in Annexure A also further illustrates the preferred location, configuration , accesses, land inclusions and specifically the connections and associations with the existing Atlantis Industrial Area that will, selectively and through careful stakeholder consultation, be incorporated in the future "Atlantis Industrial Re-development Zone" (AIRZ).

## 5. CONCLUSION

It is herewith recorded that it is the intention of Cape Metropolitan Investments 006 (Pty) Ltd to make a formal presentation to the City of Cape Town as well as further detailed submissions to the PAWC Department of Environment, Planning & Economic Development, and to commence with the processes related to such a proposed land use and establishment of a new infrastructure project to the benefit of all the communities of the Greater Cape Town Metropolitan Area.

In the light of the above, and as stated in this letter, Cape Metropolitan Investments 006 (Pty) Ltd would be comfortable and support the proposed "Option A" corridor alignment for the intended transmission power lines, mainly on the grounds of its more practical proposed servitude positioning and site specific location, which will not have a major impact on, or directly negate the potential for the establishment of a secondary international airport for Cape Town, and deny the Atlantis Township and Atlantis Industrial Area the opportunity for socio-economic up-liftment and urban renewal, excluding these communities from critical job creation and tertiary education programs.

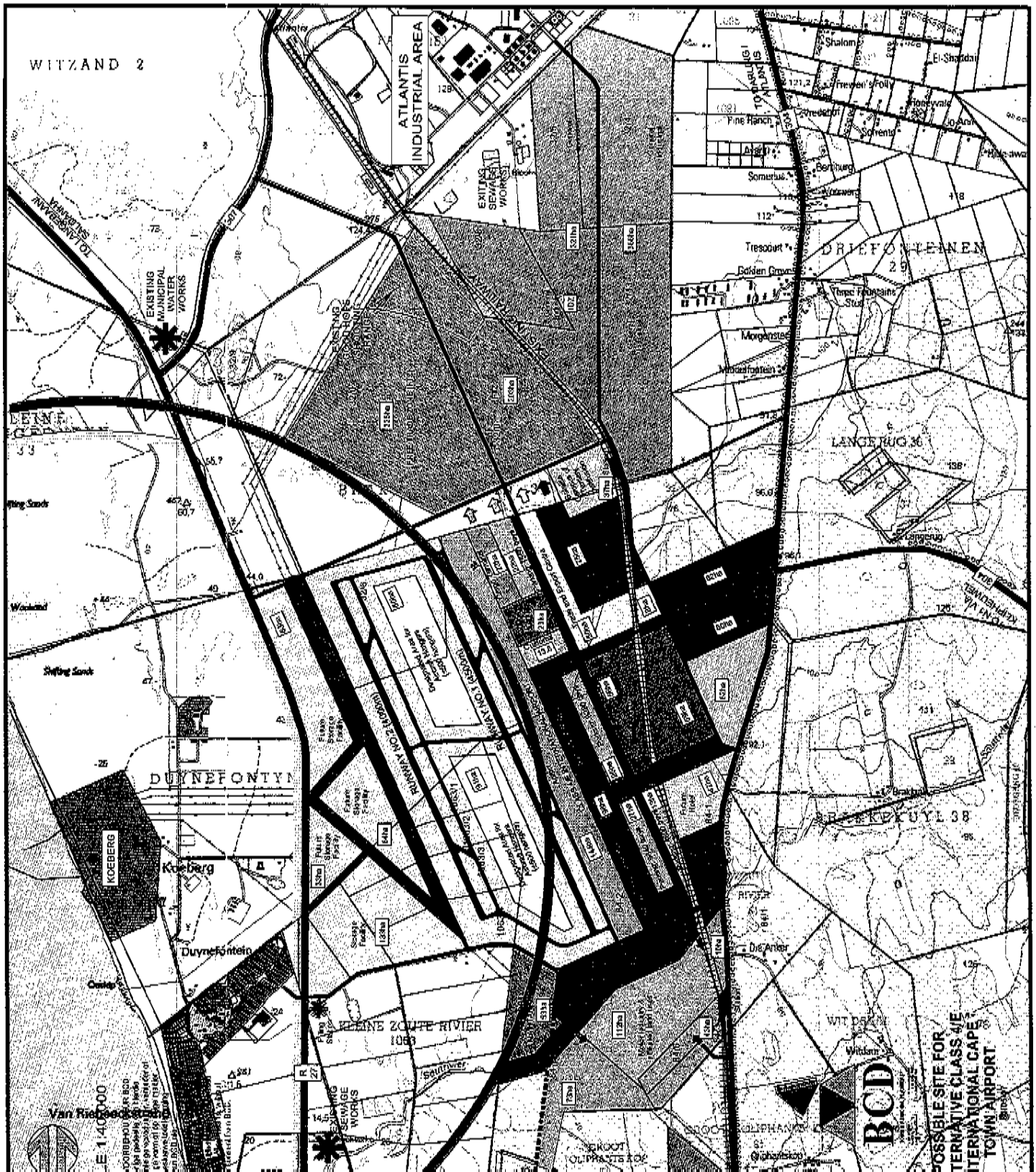
We appreciate the opportunity to on the one side inform Eskom of a significant new private sector initiative, but clearly also on the other side, to be allowed to formally express our concerns and subsequent expression of our preference for the future alignment of the transmission power lines.

Your kind attention and acceptance of our comments are highly appreciated.

Yours truly,

ENGELBRECHT

Andre Engelbrecht
CEO : Cape Metropolitan Investments 006 (Pty) Ltd


WITZAND 2
ATLANTIS INDUSTRIAL AREA
EXISTING SEWAGE WORKS
EXISTING MUNICIPAL WATER WORKS
DRIEFONTEINEN 29
LANGEJUG 36
BRAKKEKUYL 38
DUYNEFONTYN
KOEBERG
Koeberg
Duynefontein
KLEINE ZOUTE RIVIER 1063
Van Riebeeckstrand
BCD
POSSIBLE SITE FOR ALTERNATIVE CLASS 4/E INTERNATIONAL CAPE TOWN AIRPORT

# Environmental Impact Assessment for the proposed Ankerlig Power Station Conversion and Transmission Integration Project, Western Cape

## PUBLIC INVOLVEMENT PROCESS REPLY FORM

Return completed reply form to: **Shawn Johnston** of **Sustainable Futures ZA**
Fax: **086 510 2537** Phone: **083 325 9965**
E-mail: **swjohnston@mweb.co.za**
Postal Address: **PO Box 749, Rondebosch, Cape Town, 7701**

**Please provide your complete contact details:**

| | | | |
|---|---|---|---|
| Name & Surname: | HILTON WESTMAN | | |
| Organisation & Designation: | ESKOM KOEBERG - CONSERVATION OFFICER / NATURE RESERVE HEAD. | | |
| Postal Address: | PO BOX 53 | | |
| | KERNKRAAL 7441 | | |
| Telephone: | 021- 5532466 | Cellphone: | 0827379911 |
| Fax: | 021- 5534471 | E-mail: | hilton.westman@eskom.co.za |

**Would you like to register as an interested and affected party (I&AP)?** (please tick the relevant box) YES ✓ NO

Note: You are required to register as an I&AP to receive further correspondence regarding the EIA process for the project.

**Please state your interest in the project** (add additional pages if necessary):

NATURE RESERVE ALIGNES THE R27 "NEIGHBOUR", ESKOM - PROTECTION OF THE KOEBERG NATURE RESERVE HERITAGE AND ITS BIODIVERSITY WRT MIGRATION OF WILDLIFE (PATTERNS) AND CORRIDOR BENEFITS.
THE RESERVE IS INCLUDED IN THE SCOPE OF STUDY. (BORDERING).
HAVE ALREADY ASSISTED WITH E.I.A. INPUT - WRT POSSIBLE WATER LINK ROUTE.

**Please list your questions, views or concerns regarding the project** (add additional pages if necessary):

I CERTAINLY SUPPORT OPTION A, BASED ON MY OWN OBSERVATIONS AND SITE KNOWLEDGE IE. NATURE RESERVE.

**Please provide contact details of other persons who you regard as a potential interested or affected party:**

| | | | |
|---|---|---|---|
| Name & Surname: | | | |
| Organisation & Designation: | | | |
| Postal Address: | | | |
| Telephone: | | Cellphone: | |
| Fax: | | E-mail: | |

**What is your preferred language of correspondence?** (please tick the relevant box) English ✓ Afrikaans

Savannah ENVIRONMENTAL (PTY) LTD

SUSTAINABLE FUTURES ZA

This assessment is being conducted on behalf of Eskom

(Sien keersy vir Afrikaans)

CITY OF CAPE TOWN | ISIXEKO SASEKAPA | STAD KAAPSTAD

Milpark Building
cnr Koeberg & Ixia Street
Milnerton, 7435
P O Box 35
Milnerton, 7435
**Ask for: Morne Theron**
Tel no: 021 550-1087
Fax no: 021 550-1003
E-mail: morne.theron@capetown.gov.za
Website: http://www.capetown.gov.za
Ref: B21/1/2/2/13C
**Application no:**
Filename:

Milpark Building
cnr Koeberg & Ixia Street
Milnerton, 7435
P O Box 35
Milnerton, 7435
**Cela:**
Umnxeba: 021 550-1087
iFeksi: 021 550-1003
iRef: B21/1/2/2/13C
**Inomb yesicelo:**

Milpark Gebou
h/v Koeberg & Ixiastrate
Milnerton, 7435
Posbus 35
Milnerton, 7435
Tel no: 021 550-1087
Faks no: 021 550-1003
Verw: B21/1/2/2/13C
**Aansoek nr:**

STRATEGY & PLANNING – Environmental Resource Management Department: Environmental and Heritage Management Services: Districts B & C

19 February 2008 [FAX: 086 510 2537]

Sustainable Futures ZA
P.O. Box 749
RONDEBOSCH
7701

Attention: Mr Shawn Johnston

Dear Sir

**PROPOSED ANKERLIG POWER STATION CONVERSION & INTEGRATION PROJECT**
**[DEAT Ref: E12/12/20/1014(Power Station Conversion) and 12/12/20/1037(Transmission Line)]**

The *Savannah Environmental (2008) Draft Scoping Report: Proposed Ankerlig Power Station Conversion & Transmission Integration Project, Western Cape Province*, dated January 2008, refers.

In addition to the specialist reports and issues already listed in the aforementioned scoping report, as well as the meeting held on 21 November 2007 with the City of Cape Town: Environmental & Heritage Resource Management department, the following is reiterated:

1. Biodiversity off-set: The Botanical Assessment (Nick Helme, letter dd 14 January 2008) concluded, amongst other, that:
   *' ...It should be noted that some sort of biodiversity offset is likely to be recommended at the Impact Assessment stage in order to compensate for the unavoidable loss of existing biodiversity and habitat (Endangered vegetation type) on the site. This would be in addition to the standard basic mitigation such as Search and Rescue or various species..."*

   However, the above is not included in Table 9.1: *Summary of the issues that which require further investigation within the EIA phase and activities to be undertaken in order to assess the significance of these potential impacts* (page 128). Kindly include the same to ensure that the Botanical Assessment identify suitable bio-diversity offset projects (e.g. expansion of the Blaauwberg Conservation Area) during the EIA phase.

   Eskom's response, during our 21 November 2007 meeting, to bio-diversity offset relating to this activity is that Eskom have established various environmental offset and ecological corridors along the national grid. However, the opinion is strongly held that an offset should be implemented locally. This, aforementioned opinion, is further strengthened by the fact that the other three proposed Eskom developments on Cape Farm 34 [i.e. New Training Complex (E12/12/20/997), Additional nuclear station (E12/12/20/944) and the Pebble Bed Reactor] will cumulatively lead to significant loss of Cape Flats Dune Strandveld.

   It is worthy to note that a similar bio-diversity offset recommendation, to be implemented locally, was made during the assessment processes of the OCGT units. At that stage

biodiversity-offset relating to the loss of endangered vegetation type on the site, measuring 20ha, where recommended at a ration of 1:4. Yet the recommendation never translated into the Environmental Authorization. The opinion is held that this said bio-diversity off-set should now be formalized.

2. Visual Impact: It is unclear from the current information to gauge how wide the 60m high towers will be and therefore difficult to assess their impact on the skyline. The visual impact assessment should therefore include a scaled elevation of the 60m high smoke stacks which illustrate the said stacks in relation to the existing 30m tall structures.

3. Social Impact Assessment: Currently the only listed risk related to the increased fuel transportation seems to be increased traffic. The Social Impact Assessment must include the risk of transporting the extra fuel related to the CCGT. The 'new figures' in terms of this impact must reconciled with the studies that was suppose to have been undertaken with regard to the original OCGT EIA study.

4. Appendix C: Quality Control Sheets: The Control Sheets' heading wrongly refers to *Wind Energy Facility* instead of CCGT.

In conclusion, this office concurs that Option A of the proposed Transmission line route determination should be the preferred route alternative.

Yours faithfully

(for) **Pat Titmuss**
**HEAD: ENVIRONMENTAL & HERITAGE MANAGEMENT**

**From:** "R Mike Longden-Thurgood" <mike.thurgood@imaginet.co.za>

**Date:** 14 February 2008 2:51:22 PM
**To:** "Shawn Johnston" <swjohnston@mweb.co.za>
**Cc:** "Ossie Oswald" <Ossie.Oswald@capetown.gov.za>, "Mike Young" <mikey@cape.ffs.co.za>, "Mark Baird" <mark@ecoserv.com>, "Hans Linde" <Hlinde@pgwc.gov.za>, "David Oliver" <David.Oliver@capetown.gov.za>, "Catherine Fedorsky" <fedorsky@global.co.za>, "Arthur Bell" <ajbell@cae.co.za>, "Grant Ravenscroft Ecoserve" <grant@ecoserv.com>, "Steve Poole" <PooleS@eskom.co.za>
**Subject: EIA DSR for the Ankerlig power station OCGT converstion to CCGT**

**Mr Shawn Johnston, Sustainable Futures ZA, Rondebosch, Cape Town**

Dear Mr Johnston,

**DSR - Ankerlig power station OCGT units conversion to a CCGT units**

I propose to set my thoughts down as I read through the various DSR documents. It could, therefore, arise that my points are dealt with later in the DSR or its appendices. It is to be understood that this is the most appropriate way to deal with a screen presentation of a lengthy report, which would be far too costly for the private individual to print out, especially only for a once read through. Accessing a hard copy in a library is only useful for the I&AP who has no more intention than to peruse the documents superficially, in as short a time as possible.

## WATER

**1 Draft ESR - p.25, last para, quote:** "***Treated domestic waste water is utilised by the CoCT to recharge the groundwater system of the Atlantis primary aquifer system. Therefore, the abstraction of effluent from the domestic wastewater stream would impact on the balance of this system and, as such, on the availability of groundwater within this aquifer, which is the primary source of water to the Atlantis area. The option was not supported by the CoCT***".

I am curious about this. Whatever water is going to be abstracted from another aquifer, what amount would be lost in its flow through the CCGT systems**;** would it become contaminated during its flow**;** what amount could be returned to the aquifer which might have satisfied the CoCT? Without further important information, I get the impression that situation has been looked at rather too superficially. Whatever alternative has been selected will emerge as I read on, of course, but what water supply would be the least expensive to use?

Was the CoCT provided with inadequate information to allow them be able to make any other but a negative decision? Indeed, did they ask for further information? If they did ask the questions, was it they relevant information they were requesting? And if they didn't ask - - - -?

**2** ***Ibid*****, p.26, 2nd para:** the estimated daily volume requirement for water is ~500 m-cubed/day. I see that it is the intention that whatever balance of water remains after exiting the steam condensers will be discharged direct into the "hydrological barrier". Will the discharged water be contaminated? However, because it will presumably be used in closed condensers, where could any contamination arise from? For example, is there a need for some chemical processing of the feed water to prevent the internal surface of

condenser pipes from becoming coated with residues?

Surely, because aircooled condensing towers are proposed, this water will be what is used to supply steam to the turbines. Does this mean that it is anticipated that around 500 metre cubed of water will disappear into the atmosphere per day, apart from that which is condensed? The condensed water will be "polished" and reused.

It is interesting that, because condensing water is to be obtained from another source than the Atlantis aquifer, any amount which can be pumped into the hydrological barrier for Atlantis could have the beneficial effect of actually increasing water availability for Atlantis by providing a stop-flow situation, thus reducing the normal aquifer flow towards the sea.

Obviously we have a highly complex situation here, with cost effectiveness of the water supply to the CCGT units vs increasing the water supply for Atlantis, the latter becoming necessary as the town slowly emerges from its long period of stagnation.

But here's another possible conflict**:** if the latter scheme is adopted, if and until Atlantis requires more potable water, could recharging the hydrological barrier from another source (eg see next Section c in the DSR**:** *The use of potable water form the Witzand Water Treatment Works*) effectively increase the height of the water table in the Atlantis aquifer to an unacceptably high level until Atlantis requires more potable water? If this was to be the case, there might be a need to consider the possibility of a direct diversion bypass line for the condenser discharge water into the sea.

Thus we have a tight juxtaposition of economics of the condenser water supply for the CCGT and the social situation relating to the availability of future *increased* potable water supplies for Atlantis. Quoting from the same para**:** "***Such an investigation would require extensive modelling to provide meaningful results***". Actually, I would tentatively suggest that it's **data** which are required, not just **results**.

**3** ***Ibid*****, section d) Seawater desalination:** I have no idea what power requirements would be required for a reverse osmosis seawater desalination plant, but I would guess there might be a need to consider the possibility of installing a tenth CCGT unit to provide the required electricity supplies.

**4** ***Ibid*****, p.27, highlighted para just before Section 3.1.2:** this uses the word "nominated" for using the Witzand water. I respectfully suggest that this is the wrong word to use. "Chosen" or "Selected" are more appropriate alternatives. It's individuals who are ***nominated*** in a voting process.

**5** ***Ibid*****, p.29, top para:** litres can be expressed in cubic metres, density effects being taken into account. Cubic metres are far more meaningful than volumes expressed in millions of litres. May I suggest that where litres are quoted that the equivalent volume for the fuel be given in cubic metres in brackets immediately following.

## NATIONAL GRID INTEGRATION & TRANSMISSION LINES

**6 P.29, Section 3.2 Integration of the CCGT Power Station into the National Grid:** From a question I put at today's meeting at Koeberg, I understand that the 765/400 kV transformer at the Omega substation can be operated both ways, ie in the event that there's a need to export power supplies out from Ankerlig to the east.

**7 P.31, Power line routes to the mega 400 kV sub-station:** I presume that the local population will have pronounced their preferences, but on balance I would choose in this order**:** first **red;** second **blue;** third, **green**, don't consider it at all. (Note**:** reading Chapter 7 it seems that I was right. No, I did ***not*** read it first!)

**Footnote:** an attendee from Melkbos asked why the preferred line A by-passes the inset "vee" just east of the Koeberg PS. The response was that this would be looked at. However, there's one specific aspect which shouldn't be overlooked, namely that if the "vee" line was to be chosen, that would introduce ***two*** new supporting towers which would need to be strengthened to take the sideways loading from the overhead conductors attached to them. However, from the aspect of recreation**;** or for crop growing**;** or archeologically**;** or from the point of view of flora and fauna**;** or *who has their eye on this vee-shaped piece of land for development?* - what is it which seemingly makes it so important for it not to be trapped by the power lines?

**8 Section 3.2.2 Project Operation Phase** - Quoting**:** "*The expected lifespan of the proposed transmission line is between 35 and 40 years - - -*". I don't know what criteria Eskom adopts when it establishes the route for a new power line, but as it requires a 55 metre wide servitude, and in view of the life of a typical power line and its support structure, would it not be advisable to adopt a 110 metre wide servitude? On this basis, and assuming that the CCGT would be reconstructed on the same site once it had reached the end of *its* life, in particular assuming that the power station site remains the best one for reconstruction, a double width servitude would allow a parallel line to be constructed, after which the old one is deconstructed. In this event there should be no need for future servitude negotiations because it would all have been settled at the outset. (Also refer to Clause 14 below).

**9 P.84, Social investment:** I wonder if the matter of improving future water supplies has been the subject of questioning from Atlantis residents? I have raised the point above that using water extracted from a remote aquifer and re-injecting what remains into the Atlantis aquifer towards the sea could reduce the run-off from the aquifer, and result in an increase in water availability for Atlantis.

I suggest that this possibility needs to be investigated to ascertain if the idea is a practical one. If it is, then consideration would also need to be given to the situation if ever in the future the Ankerlig power station was to be decommissioned the returned to its "greenfield" status.

**10 Appendix A -** no comments**; Appendix B -** no comments**; Appendix C -** no comments**;**
**Appendix D -** no comments**; Appendix E -** no comments**; Appendix F -** no comments**;**
**Appendix G -** no comments**; Appendix H -** no comments**; Appendix I -** no comments

## NOISE

**11 Appendix J, Section 4.1 Meteorology:** My point really has no bearing on the noise and pollution emissions for the Ankerlig facilities. But I am concerned about equating the meteorology of the Western Cape with that of a Mediterranean climate merely because "rain occurs predominantly in winter and the summer months are generally dry" (quote from 2nd para). This doesn't seems to me to reflect a true comparison. I prepared a lengthy and boring presentation on my thesis, but which I have relegated elsewhere!

**12 Appendix J, p.9 last para:** this para starts "*The predicted noise levels will then be compared against current legislated limits, as well as local and international guidelines, in order to quantify noise impacts in the surrounding areas. Based on the expected locations with maximum impact, an appropriate noise monitoring programme will be put forward, in order to ensure future compliance with noise guidelines*".

I think that the last sentence needs a little more thought. For example, a scheme which requires the operational power of a gas turbine to be limited to reduce noise from its exhaust to achieve the

guidelines would not be acceptable, I am sure. A situation could arise which requires some form of mechanical noise limiting design feature to be added to the exhaust system - assuming, of course, that this will be the point of greatest noise emission.

From the existing four turbines, I assume that the noise level - some sort of whining noise I would imagine arising from the bearings - has been established to lie within acceptable limits. But we all know that noise isn't necessarily a factor of loudness alone - witness those people who have vast output loudspeakers fitted in their cars which, an audiologist has assured me, can be expected to cause a noticeable hearing loss after about ten years.

I haven't read the noise regulations, and I wonder if they include a factor for the *quality* of the sound. Quality is probably the most difficult characteristic of sound for which to formulate a sensible assessment, because noise is so subjective. But it is for this very *subjective* reason that some solution needs to be sought, if one isn't already available. I am concerned that there isn't any indication that the noise regulations include assessing noise quality as well as intensity.

**13 Appendix K -** no comment**; Appendix M -** no comment**; Appendix N -** no comment**; Appendix O -** no comment**;**

## HERITAGE

**14 Appendix P - Heritage study:** On p.2 mention is made that Line A "*is considered satisfactory as is also runs parallel mostly to an existing corridor which has already been disturbed*". That statement is absolutely true - it can't be faulted. However, is it not worthy of being mentioned that this particular corridor is actually one along which there are already existing overhead power lines and their support towers? Is this not one of the considerations for possibly recommending this to be the preferred line? Is not hiding the bushel under a haystack being mildly perverse, even at this early stage of the report?

I appreciate that this Appendix deals with the heritage factor for the recommended route, not its visual appearance. However, it presumably cannot be discounted at this stage that using a route along which overhead transmission line towers are already present offers a strong weighting factor to be taken into account when recommending a preferred route.

On some scaling table with various factors, weighting numbers may need to be applied, ***including both visual and heritage considerations***. We have a special case here, with relatively tall towers presenting a marked visual appearance, which cannot be satisfactorily dealt with purely on heritage factors, taken in isolation.

**15** A question was raised at the Koeberg meeting about the proposed 60 metre exhaust stack. A response indicated that this might possibly be reduced in height.

I raised the point during the visit to the Ankerlig power station that, because the temperature of the exhaust gases from a CCGT will be considerably lower than from the OCGT then, with a lower stack height, the lower temperature gases will be more dense, and will not rise so far from a lower stack, unless power was to be used to force the gases up the lower stack with a considerably increased velocity. Surely that would be a waste of power when, presumably, the 60 metre stack has been chosen to take the gases from the turbines to what has been judged to be an acceptable exit velocity from the stack, relying on their reduced density to self-raise them up the stack and to a safe height above it before being generally moved horizontally by the wind, and then dispersed, eventually looping and reaching the ground, hopefully beyond Atlantis in SW winds.

However, the best of man's intentions can be clobbered by low inversions. (Interestingly, there used to be a coal fired power station on the main road approaching Preston in Lancashire, England, from Warrington which, in order for the exhaust gases to be discharged above the relatively frequent winter inversions, was at least 200 metres high. No joke. I understand that the exhaust stacks at the Sasol Secunda plant are 200 metres high, with any pollution eventually looping to ground level over a distance of about 30 km).

Regards,

R Mike Longden-Thurgood

PrSciNat, BSc, MINucE, MSRP (Retired)

5 Nerina Street, Milnerton 7441

'ph&fx: 021-552-6634 Fx2email: 086-617-2225 Cell: 072-345-6507

Environment representative, Institution of Nuclear Engineers
Environment correspondent, National Association for Clean Air

# Environmental Impact Assessment for the proposed Ankerlig Power Station Conversion and Transmission Integration Project, Western Cape

## PUBLIC INVOLVEMENT PROCESS REPLY FORM

Return completed reply form to: **Shawn Johnston** of **Sustainable Futures ZA**
Fax: **086 510 2537** Phone: **083 325 9965**
E-mail: **swjohnston@mweb.co.za**
Postal Address: **PO Box 749, Rondebosch, Cape Town, 7701**

**Please provide your complete contact details:**

| | | | |
|---|---|---|---|
| Name & Surname: | Tyron Williams | | |
| Organisation & Designation: | Dassenberg Residents Association: Vice-Chairperson | | |
| Postal Address: | 1621 | | |
| | Dassenberg | | |
| Telephone: | 021-5724092 | Cellphone: | 0827140370 |
| Fax: | 021-5724092 | E-mail: | tygro@theweb.co.za |

**Would you like to register as an interested and affected party (I&AP)?** (please tick the relevant box) YES [X] NO [ ]

Note: You are required to register as an I&AP to receive further correspondence regarding the EIA process for the project.

**Please state your interest in the project** (add additional pages if necessary):

Representing an affected Community.

**Please list your questions, views or concerns regarding the project** (add additional pages if necessary):

Concerns: possible noise pollution (as currently experienced by some members.

**Please provide contact details of other persons who you regard as a potential interested or affected party:**

| | | | |
|---|---|---|---|
| Name & Surname: | | | |
| Organisation & Designation: | | | |
| Postal Address: | | | |
| Telephone: | | Cellphone: | |
| Fax: | | E-mail: | |

**What is your preferred language of correspondence?** (please tick the relevant box) English [ ] Afrikaans [ ]

Savannah ENVIRONMENTAL (PTY) LTD

SUSTAINABLE FUTURES ZA

**This assessment is being conducted on behalf of Eskom**

(Sien keersy vir Afrikaans)