

Comments on Scoping Report on proposed Wind Energy Facility near Caledon.

I have confined myself to commenting on the two aspects within my brief namely the impact on the environment and birds.

Floral report: The report makes clear that the potential for damage to 2 rare biomes exists. There are a number of disturbing comments in this report.

The investigator visited the area assuming that the area concerned was 1400ha in extent. He later learnt that this was approximately ½ the area involved. We are left with the possibility that the report underestimates the possible intrusion into the natural habitat.

ii) The author indicates that it would appear possible to site the turbines in disturbed areas, but it is not whether all 150 turbines could be sited in this area or whether he is referring to initial 50.

Clearly before any meaningful comments can be made these 2 points need clarification.

Bird Impact Report:

It is unfortunate that the author did not consult the ADU – they have extensive records from a number of sources – SABAP2 project although not complete may have provided some data. The CAR (Co-ordinated Avifauna Road counts) has been conducted in the Overberg for many years. Blue Crane and Bustards are important species monitored on these counts.

There is a discrepancy between the tables presented as to the veld types in this report and that of the botanical report. The latter reports approx. 60% as totally transformed. The birding report sites tables of 100% fynbos/99% fynbos + 1% forest. While in this report this is mentioned in passing. The differences in spectrum of birds in pristine fynbos and agricultural land could be significant.

The author concentrates on Red Data Book species while important an overall assessment of the birds present is also valuable in assessing potential impact.

It would be interesting to have the authors comments as to whether monitoring of the area by volunteers to assess more accurately the species composition and numbers may be helpful.

The limited data would suggest that wind farms situated near ridges may be involved in greater bird strikes. Would the author recommend having the area patrolled, after construction of the facility (if it is erected) to monitor mortality? Data is so limited that these observations are potentially important

It is unfortunate that a key reference – Shaw 2007 is not listed.

Regards,

D.A. Whitelaw

Chairman: Cape Bird Club Conservation
Committee



Greyton Ratepayers and Residents Organisation

PO Box 354, Greyton, 7233

15 December 2011

Ms Rebecca Thomas
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Dear Ms Thomas

Caledon Windfarm EIA

The Greyton Ratepayers and Residents Organisation (GRRO) is pleased to have the opportunity to comment on the draft Environmental Impact Assessment for the proposed Caledon Windfarm.

While having no formal professional capacity in the field, GRRO is keenly aware of the major energy and related water, transport and infrastructure issues that face South Africa. As a consequence it has no doubt about the need to increase the proportion of renewable sources in the country's primary fuel mix. Wind energy is an important component of this mix.

While expensive and also erratic in its supply (which means that wind cannot become a significant proportion of total supply and also that installation of wind capacity requires backup investment in so-called baseload capacity in coal, nuclear or natural gas), wind energy has two important advantages: it does not require any water for cooling purposes (an increasingly critical issue), and the time for bringing a capital project into operation is short by comparison with most other technologies.

So, GRRO concludes that South Africa must invest in windfarming, within the constraints of operating a balanced electricity supply system and of costs.

GRRO recognises that the Overberg is one of the favourable areas for windfarming in the country. It applauds Theewaterskloof Municipality's intent to create a carbon-neutral economy and accordingly broadly endorses its wish to have wind energy capacity within its boundaries. Further, GRRO is aware of the proposal, which we hope still stands, for creation of a special trust to be established by the investors in the Caledon Windfarm, should this project go ahead; we can only applaud this proposal which would be aimed at delivering a socio-economic dividend to the wider community over and above the financial dividend to the investors.

So, GRRO is pleased to give in-principle support to windfarming in TWK.

This support is, however, necessarily qualified.



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The Overberg economy is vitally dependent on its physical features: its spacious and undulating topography, its sometimes dramatic mountain backdrops, its being an important home to *inter alia* the Blue Crane, its varying seasonal colours These and other factors are crucial to TWKM's success in continuing to attract tourists, retirees and young professional and business people looking for non-urban life-styles. Windfarms, placed on the "wrong" sites or too densely concentrated, could all too easily damage or even destroy these qualities.

These general concerns are all evident in the draft EIA for the Caledon Windfarm. This document (especially in its technical appendices rather than in the main report, itself a cause for concern) clearly shows the adverse impacts visually and also on avifauna and flora. If Caledon Windfarm were the only wind project proposed in the Overberg, it could be argued – and indeed GRRO would support this argument – that the environmental costs are not so large that they outweigh the benefits of the project.

But, we understand that it is by no means the only project in the pipeline. We are aware of three other projects in TWKM alone, two of which have received environmental approval and all quite near Caledon Wind. There are more in adjacent municipalities. GRRO's concern, therefore, is of the cumulatively adverse impacts of all these projects taken together.

Consequently GRRO urges the responsible environmental and planning authorities to review collectively, not singly as if other projects did not exist, **all** the windfarms proposed for a particular region. If this were done, and if (conservative) guidelines were established that limited the "density" of windfarm development, and which also ensured that tourist spots and other areas of special interest were protected, GRRO would feel more comfortable supporting the Caledon project, safe in the knowledge that other wind projects in the locality would not proceed. Without this assurance, GRRO's acceptance of the Caledon Wind EIA can only be conditional.

Sincerely

Chairman
Greyton Ratepayers and Residents Organisation

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Rebecca Thomas
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Dear Rebecca

Re: Draft Environmental Impact Assessment Report for the Proposed Caledon Wind Farm

DEA ref: 12/12/20/1701

CapeNature would like to thank you for the opportunity to comment on the above report. Please note that our comments relate only to the potential impacts on biodiversity and not the overall desirability of the proposed development.

CapeNature supports the promotion and development of renewable energy facilities, including wind turbines. However, it must be recognised that the potential impacts on biodiversity of this relatively new technology are not yet fully understood in South Africa. We are further concerned that if not properly considered and planned for, the cumulative impacts of these facilities on biodiversity could be quite significant. It is therefore essential that a precautionary approach is taken and that turbines are placed outside of ecologically sensitive areas. It is also vital that a clear monitoring and reporting protocol is put in place so that lessons learned from newly established facilities can be shared with the wider community.

With regards to this particular application, we support the findings and recommendations of the biodiversity-related specialists, although there are some significant limitations in respect of the scope of these studies. These specialist assessments confirmed that the receiving environment includes areas that are sensitive in terms botanical, avifaunal and faunal biodiversity.

Impacts on avifauna and fauna:

Our primary concern with this proposed wind farm is the potential impacts on avifauna (including bats). The area is next to a recognised Important Bird Area and contains several potentially sensitive species.

We are of the opinion this impact assessment should have included specialist bat and bird assessments which were based on site visits conducted over an entire year (as recommended in EWT/ Birdlife Africa's best practice guidelines). The information from such studies would allow for *actual* species presence, breeding sites, flight paths, habitat preferences to be determined and would have provided a degree more clarity and certainty with regards to which species are potentially impacted and where there occur. The results of these surveys could have a marked effect on the predicted significance of the potential impacts and therefore are necessary for informed decision-making.

We also suggest that these site surveys should be used to inform what mitigation measures are required. This information is required *before* authorisation, as essential mitigation measures should be enforceable (i.e. be conditions of approval). It is also necessary to confirm if any mitigation measures that may be necessary are in fact feasible. We are therefore disappointed to note that these surveys have not been undertaken and that the vast majority of both the faunal and avifaunal studies were based on desk-top information.

While the recommended pre-construction (*but post authorisation*) monitoring does offer some scope for limited improvements to be made, this approach does not support informed decision-making. That is not to say that pre-construction monitoring has no value, but its value lies primarily in helping improve our understanding of the impacts of wind farms on avifauna (provided this is followed by *post-construction* monitoring), not the desirability of the proposed development itself.

A further concern is that even if we had more information regarding the *actual* species present on site, we have very little idea of the impact that wind turbines will have on these particular species. Most of the specialist's findings in this regard are speculation based on evidence from overseas as no scientific work has been done here. It must therefore be assumed that there is a very real risk that birds and bats could be negatively impacted on by the proposed wind farm. Whether these impacts will be of significance to local or regional populations of various species is unclear as we lack any species-specific empirical data on which to base predictions. While the specialists are of the opinion that, with appropriate mitigation, the significance of the impacts are likely to be low to moderate, the confidence in these predictions can be regarded as moderate at best.

Faced with such uncertainty, there are two choices:

- 1) One could evoke the precautionary principle and suggest that no development should take place where there are high densities of threatened species such as Blue Cranes. While this would help safe-guard the species from any negative impacts of collisions with turbines, it would also preclude wind farms from being built in large parts of the province.
- 2) Alternatively one could allow a small facility to be built under strict controls and with extensive and scientific pre- and post- construction monitoring. If this option is pursued it is vital that such information be independently analysed and the results widely disseminated to inform future assessments and decisions.

While additional monitoring of species flight paths prior to approval will increase our confidence in the predicted impacts slightly, it is only once we have empirical data on avoidance and collision rates that the impacts of wind farms on species can be accurately predicted. CapeNature is therefore of the opinion that the environmental gains of pursuing the latter option are likely to outweigh the risks associated. However, given the large number of similar applications in the pipeline, CapeNature would urge the decision-makers to commit to approving a limited number of facilities in potentially sensitive areas until we have a better understanding of the impacts. We also suggest that a precautionary approach should be adopted and all high risk areas should be avoided. The cumulative negative impacts of wind farms could otherwise be of high negative significance.

Despite the limitations of the faunal and avifaunal studies stated above, the specialists included detailed recommendations with regards to mitigation, which include proposed changes to the layout, monitoring and other management interventions. It is unclear which of these are considered feasible, although we do note with concern that *layout has not been changed in response to the ornithologist's recommendations* (who recommended that 14 turbines be removed from the high risk areas). It is unclear why these amendments are not considered feasible.

Should this application be approved, we urge that the mitigation measures as proposed by the ornithologist are included as conditions of approval. Pre-commencement monitoring must be instituted as soon as possible (although ideally this should take place before authorisation is

considered). This should be done over a period of at least a year and the data should be used to inform any additional mitigation measures required to reduce the impact on birds at these sites.

We suggest that similar monitoring should be done for bats as international experience has demonstrated that bats may be more vulnerable to the impacts of wind farms than birds.

It is vital that monitoring follows standard protocols across South Africa (we understand that DEA, together with Birdlife South Africa and EWT are developing these) so that the results from different areas can be compared. To ensure accurate results we suggest that monitoring must be undertaken by an independent specialist and audited annually for compliance. The applicant should be required to set aside sufficient funds to allow for this and penalties should be put in place for failure to observe monitoring and reporting protocols, including the possible withdrawal of the authorisation.

The EIA regulations make provision conditions of authorisation to be amended, or even for an authorisation to be suspended, if this is necessary to prevent harm to the environment. Should this development be approved we suggest that, given the considerable risks to a threatened species, DEA must agree to consider amending the conditions of approval (or even suspending approval) should the results of the monitoring indicate that this is desirable. Mitigation could include expensive interventions such as prohibiting the use of feed bins near the turbines, mandatory shut-down periods and the use of radar. We suggest that the applicant must be made aware of this risk.

A further complication is that since the landowner is not the applicant, some of the mitigation measures require agreement from the landowner. For example, some birds are attracted to feed bins that farmers place in the fields for sheep and this could cause an increase the risk of bird mortality. Should this become a problem, the landowner may be required to cease this activity and may need to be compensated for any loss incurred as a result. Agreements will need to be put in place to allow for this.

Botanical impacts

We support the findings and recommendation of the botanical specialist. Given the critically endangered status of the vegetation, we suggest that even degraded remnants are of high conservation value and should be avoided. We are therefore pleased to note that the majority of the proposed turbines and associated infrastructure will be located outside of the areas identified as sensitive by the botanical specialist. We are, however, concerned that not all of the botanist's recommendations have been implemented and some proposed wind turbines and infrastructure are still located in areas of high conservation value. Once again, it is unclear why it was not considered feasible to move them and we support the botanical specialist's finding that this will have impacts of medium to *high negative significance*. These impacts will largely be irreversible and the loss of critically endangered habitat cannot be adequately mitigated.

If and where impacts on natural vegetation of high conservation value are deemed truly unavoidable, we suggest that these areas should be the subject of more detailed botanical assessment, including a site visit in the peak spring flowering season. This will ensure that the impacts of the activity, for example on threatened species, can be fully understood. We suggest that any unavoidable impacts on critically endangered habitat and/or threatened species must be clearly outlined and appropriate mitigation measures proposed.

We are further concerned that the exact location of the turbines does not appear to have been finalised and micro-siting may still be required. While CapeNature recognises that there may be a need to fine-tune the exact layout, we suggest that there must be a clear commitment that areas of high conservation value will be avoided.

The compatibility of a wind farm and its associated infrastructure with a fire-driven ecosystem must also be considered and assessed. Will it be necessary to exclude fire from the area? If so, how will this impact on the surrounding habitat?

Once again, it is not clear which mitigation measures proposed are considered feasible and will or can be implemented. Again, some of these, specifically those relating to the management of natural habitat and securing it for conservation, are complicated by the fact that the applicant is not the landowner. We suggest that it is necessary to demonstrate that the landowner is willing to adopt these measures and that the necessary agreements are in place. In particular, CapeNature notes that it has been recommended that a stewardship agreement be entered into. This could be critical to offset the loss of natural vegetation should the current proposed layout be approved. Please note that it is the landowner who must enter into the stewardship agreement and an indication needs to be provided as to whether the applicant and landowner are willing to enter into such an agreement. This should preferably be done by means of a three way memorandum of understanding drawn up between the applicant, current landowner and CapeNature.

Wetlands and streams

Please note that there are wetland and seep areas mapped on the area in question and many of these are National Fresh Water Ecosystem Priority Area Wetlands. In our previous comments we suggested that if any impacts on aquatic ecosystems are anticipated, an aquatic ecology specialist should be consulted. We suggest that this is necessary to ensure that these features are avoided and where this is not possible, the necessary mitigation measures are put in place. This does not appear

Conclusion

CapeNature is concerned that this process has been constrained by the lack of detailed site assessments, lack of clarity with regards to certain impacts and uncertainty around the feasibility of the mitigation measures that have been proposed. We suggest that there is a substantial amount of information still required if an informed decision is to be made regarding this proposed development.

We will gladly comment on any additional information provided for review. CapeNature reserves the right to revise initial comments and request further information based on any additional information that might be received.

Yours sincerely



Samantha Ralston
For: Manager (Scientific Services)

COMMENT ON DRAFT EIA REPORT

FOR CALEDON WIND FARM

DEA 12/12/20/1701

SUMMARY

(1) The main conclusion drawn in this DEIR seems to be that, although some of the Negative Impacts are unacceptably High or Medium-High, implementation of the recommended mitigation will reduce these ratings and they can then be outweighed by High Positive impacts. However, it is evident that the main mitigation measures either have not been agreed by the Applicant (and maybe will never be applied) or have not been substantiated:-

- There is no Memorandum of Understanding covering a Stewardship agreement with Cape Nature, so the Negative Flora impacts must still be considered unacceptably Medium-High.
- All the turbine and access roads' positions recommended by the specialists have not been adopted by the Applicant.
- Specifically the turbines in Phase 1 have not been removed from the main ridge, which is a primary cause of the High Visual impact.
- In the absence of a real Positive impact on local employment, the potentially significant impact from local benefits over 20 years or so from Community Trust share dividends has not yet been validated.

In these circumstances, it is considered that the initial High or Medium-High Negative assessment significance, with no mitigation, should stand.

(2) Although there are statements from specialists confirming no adverse changes to impact assessments done on the preliminary site layout, when compared to later layouts, these have to be questioned as there is a lot of confusion concerning the boundaries of the site and the actual final positions of turbines and infrastructure.

(3) The quality and presentation of the site layout drawings is far from satisfactory in that the topographic and environmental constraints are not clearly relateable to turbine and infrastructure positions. This clearly adds to the problem defined in (2) above and may influence the validity of the decision making process.

(4) Contrary to statements in the DEIR, this proposal is not aligned with local and provincial guidelines in many respects:-

- Phase 1 is a development along, and too close to, a dominant ridge line.
- There is no separation between this site and 3 other adjacent possible sites, and part of the already approved Dassiesfontein site is only about 2 km away.
- Buffer distances required between turbines and roads, scenic routes, water bodies etc are not consistent with the recommended guidelines.

(5) Claims that this application complies with local Municipality policies as expressed in the IDP and SDF are exaggerated. Further, there has been no public participation or consultation concerning Wind Farms in the Overberg, for either the IDP or SDF.

(6) The DEA, in their letter of acceptance of the FSR, ask that all comments from all relevant Authorities are submitted with the final EIA including those from Dept of Agriculture and Eskom.

They also request that certain specific issues are considered and addressed – a large proportion of which is still not included in the DEIR.

(7) The impact assessments of Bats and Transportation (Traffic) are considered to be inadequate; there are significant shortcomings and omissions in those for Avifauna, Social, Visual and Noise.

(8) The EMP does not give sufficient details, especially of baseline surveys and monitoring programmes for Avifauna and Bats, and it contains many contradictions and omissions.

SITE AREA

The Final Proposed Caledon Wind Farm Layout is shown in Figure 17.1 of the DEIR. However, farm portion 3/263 (narrow strip in central north area) is not included, but appears on other main maps, and 64 turbines are shown instead of 71 in the text.

Figure 1.3 in the DEIR, titled '*Proposed positioning of the turbines*', which does include this portion 3/263, also includes farm portion 1/264 to the north western end of the site, which includes 2 turbines apparently outside the site area (Nos 18 & 37), and another portion due South of farm 4/264, which also has an extra turbine (No 21) outside the 'apparent site area'. A total of 74 turbines are shown. Portion 1/264 is also shown as part of an adjacent possible energy facility in Figure 24 of the Visual study (Appendix P of the DEIR) – although no such map occurs in the main DEIR report itself.

The Avifauna report (figure 2) shows all 74 turbines on the enlarged site, whereas the Noise report shows only 63 turbines. A letter attached to the Flora report shows 2 maps with a total of 67 turbines.

The Heritage report (HIA) is based on 70 turbines although only 17 turbines are shown. Only the original designated 1400 ha, rather than the revised 3500 ha, were comprehensively surveyed.

Figure 4 of the DEIR Flora report shows a vegetation and land use map, the same as figure 7.10 of the main DEIR, which was supplied by D Hoare but re-issued as an Arcus Gibb map. However, Hoare's Fauna report, Appendix I of the DEIR, contains a similar map which shows 2 extra portions in the northwest area.

At best, this represents shoddy workmanship. At worst, the range of conflicting information makes it impossible to quantify the severity of the constraints and the environmental impacts, and to assess the potential results of the mitigating measures proposed.

A summary of this confused information was sent to the EAP on 5 December 2011 by Email, which was acknowledged, but no response was forthcoming.

MAPS

There is a series of high definition maps in Appendix S, with quality enough to differentiate the main features and constraints, which show all 74 turbines. As discussed above, the site area needs to be confirmed and the turbine positions (preferably when re-assessed after any re-positioning) accurately shown with all the infrastructure, including all Alternatives.

Every map should have a unique reference, the date it was compiled, all revisions dated, scale bar, legends for all features with obvious colour variants.

Figure 3 shows the vegetation, that should not be classified as "degraded" or "moderate condition" etc unless there are very clear definitions of the exact meaning of these words in terms of the degree of damage and capacity for restoration. Vegetation on all adjoining properties (as Figure 8) should also be included, especially where turbines and infrastructure abut the boundary.

All turbines (separately numbered) and all associated infrastructure need to be shown on one map, or as layers, in relation to vegetation, topographic features such as ridges, wetlands and water bodies. The infrastructure layout in Figure 6 can only be evaluated together with the Endangered vegetation shown in Figure 3. All the layout areas should be clearly visible – they do not exist on the published maps.

Unless the DEA has been provided with maps and or layers of different quality, with different content, it is evident that their own guideline for Wind Farms has not been adhered to sufficiently, to permit a proper and full assessment of the impacts on this application.

ALTERNATIVES

Although stressed as an important part of the EIA process, the investigation of Alternative sites, turbine sizes and layouts of turbines and their connection etc has not been adequately reported. Even though two other sites were rejected because of wind quality, it cannot be inferred that the selected site is the only one suitable – there are numerous other Wind Farm applications in the Western Cape. The NEMA Regulations stipulate that all reasonable and viable Alternatives are required to be identified, assessed and compared, in terms of social, biophysical, economic and technical factors.

Figure 4.2 of the DEIR shows a substation and 2 'power corridors', neither of which seems to relate to the final position of the transmission power lines. Sections 4.3.2 and 4.4.1 state that wind conditions, topography and access to suitable land and transmission line, defined the optimum mix and layout of the turbines, which therefore determined positions of access roads and cable routes.

In fact, there is no real evaluation of alternatives and no comparative performance figures are offered, for example to assess the impact of moving turbines to supposedly less financially viable positions with more environmental compatibility.

GUIDELINES

The Western Cape Guideline on Wind Farm site selection, although not mandatory, is 'recommended' by DEA, and therefore needs *to be taken into account*. In this DEIR, many of the important guideline criteria have been ignored. In particular, buffer zones are arbitrarily used, when convenient, whereas they should be considered mandatory minimums unless motivated with adequate reasons:-

	<u>Guideline</u>	<u>This site</u>
Separation between wind farms	30-50 km	zero
Local tourism route buffer zone	2.5 km	0.4 km
National roads (N2)	3 km	1.5 km
Provincial tourist route, such as R27, & N2 Botrivier to Caledon	4 km	0.4 km
Other local roads	500m	400m
Local Wetlands, rivers	500m	400m
Bird habitats and flight paths	1000m	400m
Distance from ridge lines	500m	160m

The DEA's own recommendation for residential areas and homesteads 1000m 250m

Fourteen (14) of the 250m bird zone buffers around dams in Figure 7 of Appendix S contain turbines that the Avifauna study proposed should be relocated.

In terms of the Western Cape Regional Methodology for Wind Energy Site Selection (2006), PSDF (2009), Guidelines for Development on Mountains, Hills and Ridges (2002) and the TWK Municipality Wind Energy Regional Assessment (2010), **the findings of the SIA indicate that the proposed WEF is in conflict with a number of location based principles.** These relate to development on mountains, specifically the crest of hills and dominant ridges, preference for disturbed landscapes and the preservation of existing visual and sense of place values.

HERITAGE ISSUES

In the DEADP Guidelines for involving heritage specialists in the EIA process, it is commented (see Heritage Report section 1.4.2) that the visual intrusion of development on a scenic route should be considered a heritage issue.

The Heritage study reports that the impact of the new transmission lines leading to the substation in the western section of the study area are not considered significant, as they will not be visible from the R43. However, part of the power line will follow the gravel road in the NW area of the site, where they will be very visible. Conclusions of the report include:-

- Size of the turbines precludes proposing a feasible buffer on either side of the scenic R43. No mitigation is possible.
- The impact of the turbines on the cultural landscape will be very high, with no mitigation possible.
- The cumulative impact of four adjoining Wind Farms in the Caledon area will be High.

This EIA demonstrates no real attempt to avoid, minimise or remedy the disturbance of landscape and ecosystems and loss of biological diversity that constitute part of the nation's heritage.

There is no report of any comment from Heritage Western Cape, which is understood to be a requirement of the EIA process.

VISUAL IMPACTS

The visual environment and sense of place have been generally well described in section 3.2 of the specialist study and totally support the High Significance of this impact assessment, which is irrespective of any mitigation that could be considered. Nevertheless, 2 particular impacts have been understated:-

- The single view from the lower part of Houw Hoek Pass only indicates the position of the wind Farm as seen through the rear mirror of a vehicle travelling East to West. The pass is the 'gateway' to the Overberg for local residents, tourists specifically visiting the area and traffic to the East and as such, the first views of the Overberg are very important.
- Visual impacts from the near proximity of the new overhead power line, substation and turbines along the Hawston View road, which connects the R43 to the Villiersdorp-Grabouw to Botriver road, are totally ignored.

The statement is made that the visual impact should strongly influence the decision as to whether or not to authorise the implementation of the project.

However, the author then proceeds to try and counterbalance the above argument with various comments and opinions:-

- Placement of these large turbines, especially those along the high central ridge in phase 1, may well be considered very good for operational efficiency, but other potential sites have already been selected, and will continue to be selected, that are equally financially and technically viable without the extent of this visual impact. Indeed, one can assume that the other turbines on this site are viable, most of them not having such a dramatic visual impact.
- The visual impact on viewers in the mountain areas is underestimated, taking into account the possible growth in tourism during the next 20 years or more – especially the development of hiking and biking tours and events centered specifically in the Overberg.
- The theoretical reversibility of the impact because of the possible decommissioning of the facility in maybe 20, possibly 40, years or longer is valid, except that it should not be assumed to be likely. Wherever natural vegetation is built over with foundations, access roads, trenches or hard standings there will be significant local permanent loss – this cannot be easily reversed. *Full details are required of the establishment and running of the proposed Environmental Rehabilitation Fund (proposed in the Social Economic Report, and briefly discussed in the main DEIR), together with the procedure to carry out this work.*
- Perception of the high significance of the visual impact as Positive for some persons, because they get used to such an eyesore, or when curious tourists are attracted by the 'green energy' aspect, but **the reality for the majority is that the visual impact is Negative.**
- It must be beyond belief that national and international tourists in significant numbers will spend large sums of money to travel to the Cape to view a selection of Wind Farms. The motivation for those who imply this possibility should be questioned.
- It is suggested in the Conclusions of the Visual report that no tourist facilities, other than the Caledon Nature Reserve, will be directly affected by the visual impact – this is nonsense. The visual influence of the Helderstroom Road, for the first 5 km, was assessed as High Negative – places like Rouxwil Guest Farm will be at risk. Only in the last year or so have Theewaterskloof Municipality's growth and stability prospects been linked to an active tourism policy for the region. Hiking and biking have already been mentioned. More and more farms are providing tourism facilities. Wind Farms, contrary to some assertions, are not compatible with the hills and mountains of the Overberg.
- The cumulative impact significance is said to be unaffected if the other potential Wind Farms are considered, because the overall viewshed, already very large, will not be increased although the intensity of the impact will be higher. This 'opinion' is made with the absence of any details of turbine layout and numbers for the potential sites. Although three other nearby sites are shown there may be even more in the future.
- The conclusion that residual impacts after mitigation, where areas of visual influence have been identified, are High Intensity, long term, regional in extent and of High significance is believed to be an accurate assessment. However, it is then said in table 15.1 that the perception is only Negative in the short term, Neutral in the long term for residents and actually Positive in the long term for "some visitors". This is considered perverse and should not be considered valid.

The Executive Summary of the SIA includes the report findings that:-

- **Siting of the Phase 1 turbines along the main ridge should be avoided.**
- **Establishment of more than one large Wind Farm in the area is not supported.**
- **Impact on Tourism, both local and regional, is of Medium Negative significance, even after mitigation.**

A report of a meeting with TWK Municipality, concerning another EIA in the Caledon area, refers to a 2 km buffer along the N2 and a statement is made that "**Wind Energy facilities should not be visible along the N2**".

FLORA IMPACT

The specialist report concludes that:-

- A significant amount of the study area of 3500 ha comprises High Sensitivity vegetation areas of conservation value – further loss should not be tolerated.
- Development in these areas is not recommended as it will result in permanent loss of some vegetation and maybe also of Species of Conservation concern.
- Impacts cannot be effectively mitigated.
- The proposed Wind Farm is likely to have an unacceptable Medium-High impact.

The main mitigation measures relate to the relocation of 5 turbines and revision of some access roads, and also a Stewardship program with the landowners to formally conserve and manage most of the remaining High Sensitivity vegetation areas. In the February 2010 entry in the Issues Report, the EAP has recorded a plan to follow up during the specialist studies. **It was concluded in the DEIR that the likelihood of any progress is low.**

A formal Memorandum of Understanding between all the parties concerned is understood to be a condition prior to such a mitigation measure being accepted by DEA as relevant. Without it, the assessed impact remains as "**unacceptable Medium-High Negative significance**".

AVIFAUNA IMPACTS

The requirements for the specialist study were laid down in the Scoping Report and confirmed in the TOR. DEA accepted the FSR and Plan of Study, and in fact listed a number of additional issues that *required to be considered and addressed in the EIA* – no exemptions were stated. The specific subjects for the avifauna study were:-

- Disturbance of breeding birds during construction.
- Sterilisation of breeding and foraging habitats during operation.
- Collisions with power lines.
- Collisions with turbine blades.
- Mapping of bird sensitive areas.
- Assessment of potential impacts on birds.
- Proposal of mitigation measures.

Slopes for soaring birds were identified, in particular the main ridge about 160m from turbines 1-13, but no survey done to confirm their actual use. The collision risk for soaring species using this ridge was said to be 'marginal' – no reasons given. Water sources and dams have been identified and mapped, but no survey done of their usage. Actual flight paths in particular of Blue Cranes have not been determined. There is no confirmation of the actual presence of some or all 54

potential priority birds on the site, nor their quantities. There is also no assessment of the existence in the area of threatened species on the Red Data list.

Considering in particular the high density of Blue Cranes in the area, the history of collisions with power lines, their estimated mortality in the Overberg of 10% per annum leading to the possible unsustainability of the local population, it is regretted that more work could not be done before attempting any impact assessment. **There has to be considerable doubt when an impact is rated of low significance with a low confidence level. In fact one could consider such an assessment as not precautionary and maybe invalid.**

The designation of the Overberg Wheatbelt as an IBA, even though the site is marginally outside the formal border, should be taken into consideration as the habitats are similar.

The expectations that Wind Farm operators will contemplate delaying their construction operations to avoid bird breeding periods, or relocating any installed turbines away from bird flight paths, are probably misplaced. This should give even more justification for carrying out impact assessments that are based on reasoned survey conclusions rather than conjecture – **prior to DEA decision making.**

Surveying and monitoring protocol is not defined in any detail, nor is there any reference to the current EWT Guidance document, based on the EWT-BLSA "Best Practice Guidelines for Avian Monitoring and Impact Mitigation at proposed wind energy development sites in southern Africa" (see references list). **The unreasonable and unexplained omission of such a reference should be questioned.**

IMPACTS ON BATS

Although the Plan of Study for the EIA recommends detailed field studies to identify which bat species occur in the vicinity of the site and their habitats, there appears to be no record of a site visit by a specialist with suitable equipment for carrying this out. There is discussion on potential bat species that might or might not be found on the site, or which might migrate through the area. There is discussion on potential impacts, primarily mortality associated with operating turbines, where an impact rating of Medium Negative is assessed – no level of confidence is offered. It is stated that "*Proposed mitigation measures, in the form of an environmental monitoring programme, could reduce the significance of this impact to low*" – no explanation is put forward as to just what this might mean.

It is considered that the specialist study on bats should have been done as a separate subject, and should include resident and migratory information, as was requested by DEA on their acceptance of the Scoping report. There is nothing of substantive value in this report.

The brief mentions of bats in the EMP include reference to pre-construction monitoring, with no details given.

NOISE IMPACT

It is understood that the well-known low frequency rhythmic 'whooshing' noise as each turbine blade passes close to the tower, can create problems for some people. At the lower wind speeds that are still operationally viable, the wind noise will mask the turbine noise to an extent that varies depending on topography, wind direction, presence of trees and buildings etc. However, at a particular noise receptor, the wind noise at the receptor may be lower than near the turbine and the whooshing noise may not have attenuated sufficiently to be masked. At night in a rural area,

this scenario could create a significant problem, especially if the overall background noise is about 35 dBA (day time) or 25 dBA (night time) and the receptor is trying to sleep.

It is suggested that further evaluation is necessary, if only to be assured that there is no problem, in particular as there are residential properties as close as 400-500m from the nearest turbines, and as the DEA 'Guideline for Wind Farms' proposes 1000m. **Non-compliance should be required to be motivated properly.**

AGRICULTURAL LAND USE

Changes in farming practice such as different crop cycles and animal grazing may be significant over the project life of 25 years or more. Sustainable agriculture may be forced to change as a result of social developments and/or weather changes. There is already the unresolved problem with the compatibility of controlled fires required to re-juvenate old fynbos and safety of the turbines and infrastructure, especially if the CapeNature Stewardship programme is actioned.

POWER LINES

There are contradictory statements concerning the location of substations for the different phases of construction. Routing of the new overhead power line from the only substation shown on the maps (near turbines 20 and 23) seems to cover a significant amount of High Sensitivity vegetation and follows part of the gravel road in the West and SW of the site. There is no description of the routing, no statement of the impacts on flora and the loss of vegetation resulting from access requirements (only part is along the road – this also has not been assessed for visual impact). Length of the line is about 7 km. Throughout the DEIR there are conflicting references to 2 options for substations for each construction phase – only the one is shown.

The major issue of connectivity to Houw Hoek Substation is unresolved, not least because of the possibility of several more Wind Farms requiring connection which may cause the substation and transmission line to have to be upgraded. Eskom's comment is still awaited.

LOCAL EMPLOYMENT

The information given in the SIA is not convincing, at least partly because the Applicant was not able to provide any information on labour costs. A number of 74 persons was estimated for the construction phase, spread over 4-5 years, made up from 32 skilled and semi-skilled, and 42 labourers and security. **No comment was made as to how many of these jobs were part-time.** National or regional subcontracts were anticipated, presumably to include all materials supplies and specialist supplies and services. **It was clear that the only expectations for local employment and business were limited to accommodation, catering, cleaning, security and transport.**

Training is discussed but only in terms of general intention – the education and training facilities at Worcester and Caledon are not mentioned. There is also no discussion about the supply of the special purpose vehicles required for transporting and assembling the turbines.

The impact was assessed as Low Positive improved by mitigation measures to Medium. This is considered very contentious considering the stated low expectations for a few short term jobs.

The employment prospects for the operational phase are said to be 10-12 persons full-time, all of which require certain skill levels, and again there is general discussion around training. The SIA also contains an Appendix C, maybe intended to be a contribution to the EMP, which promotes policies related to a potential full-time jobs estimate of 30 persons – *very significantly different*. However, even if a proportion of these jobs was obtained by locals, this is not considered sufficient to justify an impact assessment of High Positive. It would have been better possibly to separate out the far more significant job creation possibilities that could arise from the Community Trust; this would permit the higher impact rating.

The Community Trust sounds an excellent vehicle for social funding, but a number of queries arise:

- What is the financial or other benefit to the Operator/Owner from such a scheme?
- Has the scheme been fully approved by the various Authorities, including the Treasury?
- What is the expected operating profit per installed MW?
- What is the basis for the calculation of the dividend by the facility Operators?
- Who are the beneficiaries of the balance of 80% of total dividend?
- Is the dividend payable after 5 years of *full* operation (11-12 years after project go-ahead)?
- What happens to this dividend during the first 5 years of operation?

The very reasonable request to the EAP for a *legible* copy of Annexure D of the SIA (financial forecasts for the scheme) has not been responded to.

The following requirements need to be met prior to authorisation of this project:

- **An independent financial assessment of the scheme.**
- **Government approval.**
- **Community representation for the allocation of funds to infrastructure and social projects of TWK, beyond the usual minimal IDP consultation process.**

LOCAL AND PROVINCIAL POLICIES

Involvement of TWK Municipality with potential Wind Farms in the Overberg area is reported as proactive and supportive. However, the 2 main sources which should discuss and validate these views and consequential policies are particularly devoid of relevant details. The IDPs of 2010 and 2011 have the same bare references – "to establish a Wind Farm" and "to establish a pilot WEF in the Riviersonderend area". These followed the 2009 IDP and the reference to a partnership with DBSA and private investors around a possible Wind Farm. There has been no proposal for one or more Wind Farms put to the local Ward Committees and the public, for incorporation in the IDP as agreed policy.

It is implied in the SIA (section 4.4.2) that the other main source, the TWK Spatial Development Framework (SDF) had been revised in Sept 2010, and would be finalised and approved by Council maybe in late 2011. What was omitted was that the revision was a status quo Volume 1 draft report, which was made available for public comment. Since then, the Volume 2 draft report, covering plans and policies for the future has not been released for public comment.

One of the aspects considered of particular relevance to the proposed Caledon Wind Farm Development is claimed to be a Policy Statement 9.7 from the SDF Volume 2, which states:-

"Development along existing and proposed scenic/tourism routes should promote the character of the area, avoid contrasting elements, enhance existing tourism attractions and promote tourist infrastructure at appropriate locations". The R43 to Villiersdorp is such a scenic route that passes through the middle of the proposed Wind Farm. The nearest turbine to the scenic N2 that passes South of the site is only 1.5 km away. Some contradiction!

In order to support the selection and assessment of potential Wind Farm sites, TWK Municipality commissioned Savannah Environmental to carry out a Regional Assessment in 2010. Savannah are involved in EIAs for other potential Wind Farm clients at the moment, also in this area. There was no public consultation of any sort. The result is an unapproved guideline very similar to, and largely based on, the Strategic Initiative to Introduce Commercial Land Based Wind Energy Development to the Western Cape: Towards a Regional Methodology for Wind Energy Site Selection (DEADP 2006).

The summary map indicates that essentially the entire site is comprised of areas which are either restricted (balance of one negative criterion) or highly restricted (balance of two or more negative criteria). The "highly restricted" portion of the site comprises the prominent ridgeline north of De Vleitjies farmstead on either side of the R43. The turbines and roads would be located on this prominent ridgeline, within an area indicated as "visually restricted".

The Theewaterskloof Vision 2030 is a Municipal document that sets out to develop a long-term vision for Theewaterskloof that has wide acceptance and active support with a range of strategies which will position the region as a financially, socially and environmentally sustainable one over the next 20 years. These strategies include the creation of the TWK area as a tourism and residential/retirement life-style destination. The features that allow this include scenic routes, pristine fynbos, mountains and hills, wide open spaces, agriculture that blends in with the rolling terrain, hiking and biking, wine farms, and existing attractions like Genadendal and Greyton.

However, the SIA indicates a *potential for conflict* between the natural attractions and Wind Farms, whatever the claimed curiosity value the industrial turbines may have for some people.

TOURISM

The High Negative significance of the impact on the sense of place and landscape is linked to the huge importance of tourism to the local economy, which although relatively small now is set to become the second most important growth area in TWK for the future. The claim in the SIA that this is only a local issue is not accepted – tourists travel through the area to access the Klein Karoo, the Eastern Cape game reserves, the coastal areas and the Garden Route. A proliferation of highly visible and intrusive Wind Farms may motivate the use of other routes to and from Cape Town. Whilst one WEF may only have a local and regional impact, it is considered that the cumulative affects on tourism may even have some impact at national level.

The SIA finds that more than one large wind Farm in the area cannot be supported.
TRANSPORTATION IMPACTS

This impact study evaluated in some detail the roads to be used from Soldanha harbour and Cape Town where the raw materials would be sourced – except for the concrete aggregate from Villiersdorp. Concrete batching would be carried out on site, but *no mention made of the source, transportation or storage of water.*

Details are given in Table 4.1 for the raw material requirements for phase 3 of the construction, where the turbine foundations seemingly need 103 trips each, compared to data in Appendix B where each foundation needs 86 trips. Only one set of dimensions is given for foundations in the Appendix, that is 500 cubic metres, presumably for the smaller turbines. Table 4.2 shows a figure of 40 trips per week during peak construction, all along the R43 road.

However, there is no mention of the 700 cubic metres of spoil that must be removed for each turbine foundation and disposed of somewhere. There is also no mention of the material needed to construct new access roads and improve existing ones. Maybe the spoil can be utilised for the roads – this is not discussed at all.

No impact assessment has been made. Clearly it would be of Negative significance, possibly mitigated in part by the use of a local aggregate supplier.

POTENTIAL HAZZARD TO CIVIL AND MILITARY AIRCRAFT

Section 4.10 of the Transportation study states that existing regulations prohibit Wind Farms within 35 km of an aerodrome, because of risk to aviation navigation equipment, and that the CAA should therefore be required to carry out a detailed analysis, as there are 4 aerodromes within this safety zone. The South African Air Force should also be consulted at the highest level as there are reports of incidences in USA.

The DEIR states in sections 6.2.2 and 16.2.8 that application was made to CAA and their approval given. Nevertheless, the DEIR Conclusions state that a detailed investigation by CAA is required.

One has to conclude that someone has not applied their mind properly to this matter. If the stated regulations are valid, there has to be some specific exemption applied for and granted by a recognised authority in the CAA.

ENVIRONMENTAL MANAGEMENT PLAN

The EMP is required to be fully understood by potential contractors in the tendering process, so that it becomes legally binding. It is therefore deplored that this *draft* EMP seems to contain so many contradictions and omissions:-

- Bird surveys to determine usage of dams, slopes and regular bird paths are only "proposed".
- Relocation of 14 turbines to avoid key areas of conservation importance and sensitivity is only "recommended where feasible".
- No grazing in High Sensitive areas during the spring growing and flowering period is only "strongly recommended".
- The EWT-BLSA protocols for surveys and monitoring (birds and also bats), considered to be best practice, are not specified.
- The proximity of some turbines to High Sensitivity vegetation increases the fire hazards created by the turbines. The impacts of turbines on the vegetation, and vice versa, have not been evaluated.
- "It must be ensured that *at least 20%* of the natural vegetation in all development footprints within any areas of High sensitivity natural vegetation on site is rescued, maintained and subsequently replanted" (section 4.2.1.(b)). Surely this is too low?
- The procedures for monitoring and clearing of alien vegetation, and the area of the site to which this should be applied, is not clear.
- It seems that the ECO is only required during the construction phase, so who has the legal and management responsibility for ongoing monitoring etc during the operational phase?

FINAL EIA SUBMISSIONS

The DEA, in their letter of acceptance of the FSR, ask that all comments from all relevant Authorities are *submitted with the final EIAR* including specifically those from Dept of Agriculture and Eskom. They also request that certain issues are considered and addressed, for example:-

The Western Cape CBA map.
An overlay of the total project footprint, with details of all infrastructure.
A report on bats (resident or migrating).
An indication of denuded land area compared to impacted Renosterveld, that can be rehabilitated.
Comments from Cape Nature.
Field studies to confirm occurrence of Red Data bird species on site.

There is little evidence that much notice has been taken of these requests in the content of the DEIR. ALL the required information necessary to allow a decision to be taken should be contained in the DEIR – with only identified changes, additions and corrections in the FEIR.

It is surprising that specific input is not requested from DEA&DP, Theewaterskloof Municipality, Overberg District Municipality and Heritage Western Cape all of which are mandated to take local interests into account.

CONCLUSION

The Medium and High Negative significance of a number of impacts, and the stated problems with their mitigation, together add up to the conclusion that this proposed Wind Farm should not be authorised, because of the further deterioration of the Endangered Biodiversity and because of adverse effects on the interests of Tourism and also residents.

No reasons have been presented to demonstrate that Government policies on Renewable Energy can or should be applied in the development of this specific site, despite the highly significant environmental and social constraints.

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The Right is retained to amend any of these comments and submit additional material wherever it is deemed necessary.

This Report was authored by a registered I&AP resident of Greyton, near Caledon, Western Cape whose only interest in this project is based on environmental and social issues, who understands and accepts the need for reducing dependence on fossil fuels, and increasing the relative utilisation of renewable energy.



Brian McMahon

ex power generation Engineer

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2 December 2012

TO WHOM IT MAY CONCERN

COMMENT ON DRAFT EIA REPORT FOR CALEDON WIND FARM: DEA 12/12/20/1701

This letter serves two purposes. First we would like to register as an Interested and Affected Party. This letter is also in support of the Caledon Wind Farm Development. We are collectively home owners in the Town of Bot River. Bot River will be the town that will feel the effects (positive or negative) more than any other town within the jurisdiction of the Theewaterskloof Municipality.

During the last few years of the development and the EIA process of Caledon Wind, we (as residence in Bot River) kept our eyes and ears open regarding the Development and the EIA process. We need to make clear that the EIA and development process of the project that was followed, was done by the book and we were informed of each step by the Applicant and the consultants doing the EIA application (although we were not even formally registered as an I&A Party). This is not the same for the other applications within the area.

It is disturbing that comments (negatives) are raised from people not living within the real affected area and not by looking at a bigger picture. The studies listed or mentioned during the public hearings by them are none from the area and assumptions are made that behaviour would be the same all over the world. The only assumption, in which this scenario would be true, is that those who will object will do so out of habit or just because. It is also interesting to note that the objections or negative comments are presented by the same people with the same arguments as was for the BioTherm (BTE Wind) Application near Caledon.

It is further a disturbing fact that none of the negative comments raised are based on facts, but rather fears or assumptions made by people with no real environmental background and can be contributed to the phenomena called "The State of Fear".

It is a fact that the community requested to become part of the development, therefore the formation of the Theewaterskloof (TWK) Community Trust. We, as a community, will thus directly benefit from the dividends derived via the income of the Project and will not be reliant on the grace of a hand-out from the development company. It is further up to us (us being the residents of Theewaterskloof) to decide on how best we will use that money to the benefit for all of us. Although the natural environment is a key element to our wellbeing within the area, we also understand that even that will be lost within a few years if we do not act drastically and if we do not act against the poverty and create jobs within the area.

It seems further that most people that provided comments thus far on the draft EIA report is ignorant of the EIA process or do not trust the National Government Department of Environmental Affairs ability to put restrictions or conditions down for developers to adhere to. In this instance we refer to the Cape Nature Stewardship Programs that the Consultant raised as a condition to the approval of the EIA process. We, as the residents, requested that in the EIA public meetings and must thus be a condition to the approval within the ROD. It is simply not up to the Development Company or Applicant that must agree with such a recommendation, but they (the developer and applicant) must conform to these condition as will be laid down by the National Department. It again showed us that the EIA process was not biased and that there is a distinctive line between the developers / applicant and the

consultants undertaking the EIA process. All the land owners whose properties will be used for the Caledon Wind Farm indicated their willingness to enter into the Stewardship Programs, which will add value for us as residents of the area as well, by preserving and job creation via maintenance.

This area is heavily depended on the agricultural activities and this is the main income for the area. Unemployment increased dramatically over the last few years and most affected are those working on the farms. It is for us important that there should be a balance between food security and job creation, thus the placement of turbines where also carefully scrutinised by us. We walked the site, with the consent of the landowners, and we are happy to say that the placement of turbines was done with this in mind.

The placement of turbines on the co-called ridges are not seem as visual pollution, because the height of the masts are consistent and it will not be seen as one square block on the horizon. In an area where little is on offer during the summer months for tourists, this will offer an additional attraction form the area. The restrictions on the placement of turbines are met from EIA as well as Land Use Planning perspective.

Visual Pollution for us as residents in Bot River would be additional power lines (overhead power lines), transmission lines and substations. Once again the requests from the community were adhered to and all possible power lines will be underground, or placed like the substation out of sight. The existing distribution lines will be used, which is a huge positive for us as residents of Bot River Community. We would also like to see that there is rather bigger wind farms and not a lot of small ones scattered all over the area, thus densification and ultimate use of land, is a key factor for us.

We support the EIA Application for Caledon Wind and congratulate the EIA Consultants and Developers for a very good EIA and Development Project. We hope that the ROD for the application would be positive and that we as residents will reap the positive impact of the Caledon Wind Farm soon.

Signed:

John Carlile

Tertia Carlile

Danie Sauer

Elma Sauer

Leon Lloyd

Henriette Lloyd

Johan Smit

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By email to: rthomas@gibb.co.za

31 December 2011

COMMENTS ON DRAFT EIA REPORT FOR PROPOSED CALEDON WIND FARM
DEA Ref: 12/12/20/1701.

Dear Ms Thomas,

Please find comments below.

Flora

We must again express our dismay that the original undertaking in the DSR was removed from the FSR and now even further downgraded in the DEIA.

DSR "Avoiding, at all costs, the placement of wind turbines within Renosterveld vegetation occurring within the study area, regardless of the wind data in those regions"

FSR "Avoiding the placement of wind turbines within Renosterveld vegetation occurring within the study area"

DEIR "as well as placement as far as possible outside of natural vegetation"

All turbines and infrastructure should avoid Renosterveld and Fynbos.

We align ourselves broadly with the findings of the botanical report by Helme, though very much doubt that all the recommended mitigation measures will in fact occur, therefore applying the precautionary principle the impact must remain as having an unacceptable Medium – High negative impact on the vegetation on site.

We strongly disagree with the vegetation assessment in the Fauna report which grievously misrepresents reality regarding the state and extent of the natural vegetation on site, most of which is 'Critically Endangered', and the remainder 'Vulnerable'. There is in fact approximately 20-35% of remnant natural vegetation (Helme 2011, Flora Report), which is a far cry from Mr. Hoare's description - "most of the site appears to be under cultivation... there is little natural vegetation remaining"

Fig. 2 vegetation map shows categorization of natural vegetation but there are no definitions of the categories: 'degraded', 'good', "moderate" as applied to fynbos and renosterveld. Even partially or extensively degraded natural vegetation can provide viable habitats for indigenous fauna, and also retains significant botanical value.

Fauna

- Frog and bat studies are highly specialized areas of zoology, and should be performed by different experts, not only by your Faunal Specialist (who is in fact a botanist).

- The report 'lumps' bats with frogs seemingly with little understanding that the two taxa are very different in every aspect of their natural history. Designing surveys for frogs has no relevance for a taxon that has an aerial and migratory lifestyle, with a likely territory of many kilometers and if their migrational range is considered, this may be more than a thousand kms. There should be a separate section for the consideration of the impacts on bats.

Bats

It is abundantly clear that no on-site baseline (preconstruction) bat studies and monitoring have been performed. What little mention there is of bats is nothing more than a superficial desktop scoping assessment and can not be regarded as an environmental assessment, which was a requirement in the DEA letter of acceptance of the FSR.

Bats may be affected in different ways – collision, or death by barotrauma, and loss of foraging has been mentioned in the Fauna Report. Additional effects are interruption of commuting routes, which may be a major threat, and the emission of ultrasound by turbines. The migratory routes to and from the De Hoop Reserve are unknown at present, but wind farms may pose significant threats.

Surveys should not only be undertaken in the summer to identify local foraging bats, but also in the spring and autumn when bats may be migrating into and out of the Western Cape, to or from their hibernation sites. In view of the agricultural role of bats, all species, not only 'Red Data' species should be considered.

The economic benefit of bats to agriculture has been ignored. The impacts could be on the project farms themselves, and neighbouring farms used for foraging.

Because of the lack of knowledge about bats in South Africa, the precautionary approach to impact assessment should be adopted.

No baseline on-site monitoring has been performed, only speculations based on desk-top studies and therefore this report is nothing more than a scoping study with an unjustified impact assessment; it provides insufficient information for the competent authority to form an opinion and make a decision.

The Environmental Management Plan for the operational phase must include an ongoing bat monitoring programme for injuries and mortalities.

Why have pre-construction bat monitoring studies not been performed? It is our opinion that authorisation should not be considered until such a studies have taken place, following the methodology outlined in the "*South African Good Practice Guidelines for Surveying Bats in Wind Farm Developments 2011. Sowler & Stoffberg, EWT, 2011*".⁴

Avifauna

The scoping reports have relied on desktop data from programmes which were not intended or designed for use in EIAs. Extensive field work will have to be undertaken over an extended period covering all seasons for a proper assessment to be made.

- The recorded presence of Martial Eagles (SABAP1 & 2), classified as Vulnerable, has not been included in the list of priority species in Table 7.2, although included in the Scoping Report. The undersigned has observed a Martial Eagle (recorded in SABAP2) on a ridge not far to the NW of the proposed turbine 41 position.
- The area is well known for its perennial high density of the (Vulnerable) Blue Cranes and although there are few available data for South Africa, experience elsewhere with similar species suggests that there could be a significant risk of collision mortality.
- The population of Denham's Bustards (Vulnerable), already seriously threatened in the Overberg through power line collisions, may also suffer possibly unsustainable attrition. We agree with CapeNature that the precautionary principle should prevail.

- On-site pre-construction surveys of avifaunal activity is mandatory and it is our view that any EIA Report is incomplete without the results of such surveys, and that the competent authority should not consider any reports without those data as the EAP assessments cannot possibly be objective.
- Monitoring for injuries and mortality should continue at regular intervals throughout the operational lifetime of the project using the methodology published in the '*EWT-BLSA Best Practice Guidelines for Avian Monitoring and Impact Mitigation at proposed WEF sites in South Africa – Version (Jenkins et al 2011)*'.²
- Monitoring could be hindered by seasonal variations from crop growth cycles, thus hampering access and concealing carcasses. (The same applies to Bat monitoring).
- Results of the bird monitoring programmes, pre-construction and during the operational phase, must be placed in the public domain with copies of reports being provided to EWT, DEA, CapeNature, and registered I&APs.

Visual

Theewaterskloof Municipality has previously given assurance to the DEADP that no wind energy facilities would be allowed in the 2 km buffer zone along the N2 (which has been classified as a scenic route within this area), especially in the area where the road descends the Houw Hoek Pass towards Bot Rivier and Caledon. In addition, it is the stated intention of the municipality that wind energy facilities should not be visible along the N2.

Set-backs and negative visual impacts on national and provincial roads, and ridges are described in the Theewaterskloof Regional Site Assessment for Wind Energy Facility Development.⁵

The visual impact of this development, in particular the proposed development in Phase 1 along a prominent ridgeline is impossible to mitigate, will be highly negative, and will utterly destroy the scenic attractiveness and sense of place for visitors, tourists and residents. For this reason alone this development should not be allowed to proceed.

Cumulative Impacts

We are much concerned about the potentially huge cumulative environmental impacts of this development along with the recently authorized Biotherm project, and what we are now advised are two other large wind farm developments directly abutting on this one. We have sought further details about these new projects from the DEA. See Fig. 24 in the Visual Impact Report. Also below:

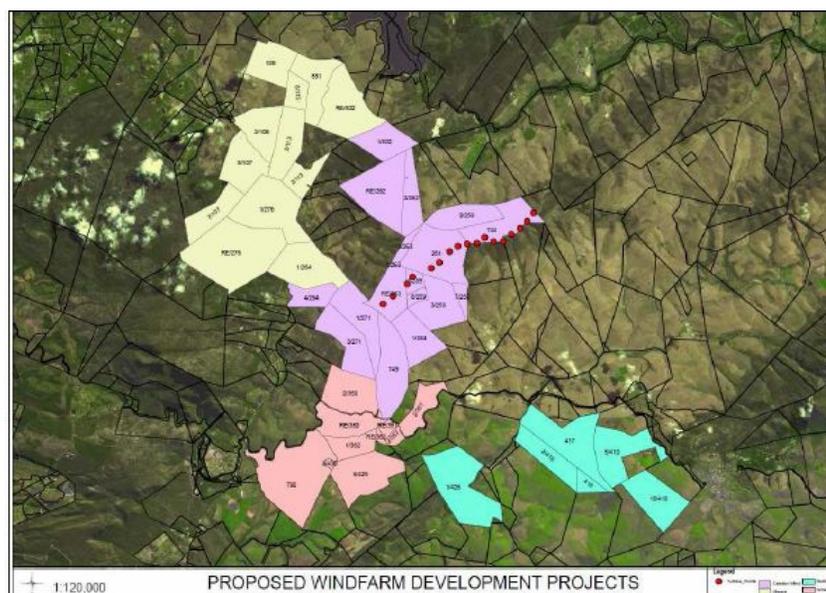


Figure 4: Proposed wind farm development in the Caledon and Botrivier area. The current study is reflected in portions of the mauve area.

The negative impacts on avitourism resulting from impacts on the visual environment and more particularly the direct and indirect effects on avifauna, in the surrounding areas are of great concern to us, and should be for those concerned with development planning and tourism promotion at all levels of government.

Bird watching is an increasingly popular hobby worldwide which has resulted in a rapidly developing avitourism industry with consequent benefits for conservation, job-creation and social upliftment.⁷

We reserve the right to amend any of these comments and submit additional material wherever deemed necessary.

Yours sincerely,

Stuart Shearer



Dr Stuart Shearer
Birdlife Overberg

References - all reference documents can be provided on request.

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