

APPENDIX 2
AVIFAUNA CORRESPONDENCE

Jean Beater

From: "Chris van Rooyen" <vanrooyen.chris@gmail.com>
To: "Jean Beater" <jean@pbai.co.za>
Sent: Thursday, December 20, 2007 11:04 AM
Subject: RE: [SPAM] Vredefort Some Study - Query from landowner on Bird Impact Study

Hi Jean

I have sympathy with the landowner but I'm not sure that the arguments put forward hold water.

I spoke to Dr. Ledger and he tells me that he has no recollection of a conversation with the landowner. He also said that in case he did have a conversation and forgot about it, he must have referred to large lines being safer from an electrocution point of view, not a collision point of view (as I expected).

The work of Mark Anderson (2000) refers. He collected collision data from 12 tracts of powerlines in the Eastern Karoo, ranging from 11kV to 400kV. I'm quoting directly from his report to Eskom:

1. So far it has become apparent that many more carcasses are found below the larger, transmission lines (see Appendix 1), than the smaller distribution and reticulation lines.

Appendix 1. The number of bird carcasses found below 10 km lengths of powerlines of different configurations in the eastern Karoo. These carcasses were located when the transects were originally cleared of bird carcasses. This does not include the carcasses located during the subsequent bi-monthly monitoring of these lengths of powerline.

Powerline type	Direction	Nearest town	Number of carcasses located
11 kV (SWER)	W-E	Britstown	0
11 kV (SWER)	ENE-WSW	De Aar	2
22 kV	NNW-SSE	De Aar	8
22 kV	NE-SW	Richmond	0
66 kV	N-S	Colesberg	7
66 kV	W-E	Colesberg	9
132 kV	W-E	Britstown	25
132 kV	NW-SE	Noupoort	33
220 kV	W-E	De Aar	35
220 kV	NNE-SSW	Philipstown	18
400 kV	NNE-SSW	De Aar	66
400 kV	NW-SE	De Aar/Hanover	75

Based on this empirical evidence it seems reasonable to conclude that higher lines are probably MORE dangerous than smaller lines.

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It is also accepted best practice to group lines together if possible, as not only makes for a more visible obstacle (EPRI 1996) but it has also been proven in a study with cranes in India that resident birds learn to avoid obstacles such as powerlines, once they have become aware of them. I therefore reasoned that since the resident birds should be aware of the existing 400 kV line and therefore have learnt to avoid it, it would make sense to place the new 765kV next to it as they are already aware of the powerline obstacle in that location.

Rgds

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From: Jean Beater [<mailto:jean@pbai.co.za>]
Sent: 18 December 2007 12:54
To: Chris van Rooyen
Subject: Re: [SPAM] Vredefort Some Study - Query from landowner on Bird Impact Study

Hi Chris

Are you able to send through a formal response as requested by Stuart possibly referring to studies...

Thanks

Jean

----- Original Message -----

From: Chris van Rooyen
To: 'Stuart Dunsmore'
Cc: jean@pbai.co.za
Sent: Tuesday, December 11, 2007 6:14 PM
Subject: RE: [SPAM] Vredefort Some Study - Query from landowner on Bird Impact Study

Hi Stuart

I'm not sure in what his assumption is based. I'm not aware of any empirical studies that support this specific statement. In fact, the work done by Mark Anderson in the Karoo a couple of years ago proved exactly the opposite, the larger the transmission lines, the more hazardous they are from a bird collision perspective. Perhaps he is referring to an electrocution perspective i.e. the smaller the lines the more hazardous they are because of smaller clearances. In this instance, electrocution is irrelevant because we are dealing with a transmission line. Maybe John Ledger or Rudi Erasmus can enlighten us?

Rgds

Chris

From: Stuart Dunsmore [<mailto:stuart@pbai.co.za>]
Sent: 11 December 2007 18:05
To: chrisv@ewt.org.za

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Cc: jean@pbai.co.za

Subject: [SPAM] Vredefort Some Study - Query from landowner on Bird Impact Study

Hi Chris,

I assume you are still at this address.

We received a query from a landowner on your bird impact study for the 765kV Zeus-Mercury line. Apparently after speaking to Dr John Ledger and Dr Rudie Erasmus, the landowner is of the opinion that the higher the line the lower the impact on birds. However, if you put a 765kv next to a 400kV the impact will be greater by as much as 20%. He implies that if you put the 765kV over a new area then the impact will be less because of the height of the new line.

We have proposed the Central alignment (ie following the existing 400kV line) as the best option on the basis of the fact that all activities will have adapted to some extent to the existing line and that therefore the impact of the new line will be less overall than placing it on a new alignment. Your bird study conclusions tend to support this from a bird perspective.

I'd be grateful for your response to this. The landowner is very upset that he may now have two large power lines over his land than just the one.

regards

stuart dunsmore

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