



CONSERVATION MAG

Protecting Raptors against wind turbine collisions: interview with Jeffreys Bay Wind Farm

ADRIAAN BUYS | VIDEO | LAST UPDATED: 14 NOVEMBER 2023

Soaring Beyond Collisions: Protecting Raptors at...



Interview With Marli Schoeman by Dr Adriaan Buys

Transcript

This editable transcript was computer generated and might contain errors. People can also change the text after it was created.

Adriaan Buys: I am having a quick discussion with Marli Schumann from Jeffreys Bay wind farm. And we're talking today about the black Harrier Raptors initiative that they've started to conserve the black Harrier Raptors in the Eastern Cape of southern Africa. now marli, I'm not a specialist and I'm



definitely not very well read on Raptors and cases for wind farms, but it is something that has been made hugely public internationally, especially with the people that try and stop green energy and try and make a case for

Adriaan Buys: I would say previous energy generation types, like for example coal-fired power stations Etc. so you have a lot of people out there who try and make a case for not having wind farms specifically when it comes to the bird.

Adriaan Buys: The threat to birds and biodiversity and your role as ESG and biodiversity manager at the wind farm, obviously. Gives me an idea that the wind farm is taking this threat seriously, and I see a lot of the information that you guys send through with the work that you are doing for the black harrier's to try and protect this the species tell me. Can you maybe just give us a little bit of an idea what the black Harrier project is and what you guys are currently doing to protect this species and it's endangered stages or it's a threatened species that you find in the area of your wind farm.

Marli Schoeman: Absolutely, I'll start with giving a tiny bit of background of how this came to be. So the environmental impact assessment was done in 2012 and during that phase the black Harrier was The wind farm was not predicted to be a risk to the black Harrier. And the reason for that is that at that time it was known the knowledge of that time was that this is a low flying bird and they wouldn't reach the rotors Swift area. When the operation started in 2014, we started seeing one or two fatalities for the black Harrier and this is where we got some Specialists involved. Especially Rob Simmons started doing some Raptor studies on the Wind Farm.



Marli Schoeman: due to this kind of studies that we did we realized that this bird is not only a low flying bird during the breeding season. They do displays up in the air, to attract the partner. And that's really when they were being hit by the turbine blades. And another thing that was discovered was also during breeding season when they come back after foraging with food. They fly higher. And so this was never known about the black Harrier which is why it was not considered an issue at the time of the author of the authorization being awarded. So when we realized it is in fact a problem, especially because this is an endangered bird. and there are less than 1,200 adult breeding birds remaining the wind farm committed to

Marli Schoeman: putting mitigation in place and additionally also putting offsets in place. So the offsets that we are trying to implement is with the goal to achieve ultimately a net gain in the population. So there's two parts of the project. It is the mitigation part on site and then the offsets of sound. So I can elaborate a bit on what are the mitigations if that's useful. All right, so on-site specifically yeah.

00:05:00

Adriaan Buys: Think maybe before we just discuss them mitigations. I think it's important that we just understand. the size of the issue, just do to get Idea it's very difficult to be very specific on how many birds are. Said but what is the effect on the population? but of the Wind Farm

Marli Schoeman: So since we started operations, we've found an average or approximately one carcass. every two years. So from 2014 to 22 current that's kind of the wind industry as a whole does have an effect on. The black Harrier and if their wind farms



that are affecting these birds don't put mitigation in place. The extinct date of this bird will be

Marli Schoeman: I'm losing my sorry. we'll Yeah,...

Adriaan Buys: We brought earlier.

Marli Schoeman: So the extinction date of these birds will be 75 years sooner than originally predicted.

Adriaan Buys: Yeah.

Marli Schoeman: if the wind farms that affect these birds Don't mitigate

Adriaan Buys: Okay, so it is a serious case that you are taking very seriously.

Marli Schoeman: Yeah, I mean it's low numbers but because it's such a endangered bird with low numb with low numbers in the population it is a serious issue.

Adriaan Buys: And then you are so sorry. I interrupted would you starting to talk about them mitigation? site here

Marli Schoeman: Yeah, so what we've already started implementing is Observer LED shutdown on demand. We've tried this for three years. This is the third year what we do basically is we've identified two Vantage points on site and then we have observers sitting at these areas doing the breeding season of the bird. So that's from about to do to December. And The Observers ultimately they're watching the skies every day every weekend and...

Adriaan Buys: Okay.

Marli Schoeman: what they do is as soon as they see a bird flying towards one of the turbines they radio or contact. On WhatsApp are Operating Center.



Marli Schoeman: our control room and they will say right turbine seven has Harrier on the way, please switch it off and it switched off immediately and only switched back on once they give the go ahead that the bird has passed. So that's one of the measures that we've been trying it very much relies on humans. Right? So we have to have land owner consent. We need to make sure that the observers are well trained in identification. We need to make sure they don't get bored sitting there watching the skies the whole day. So there's a lot of human interaction that needs to kind of work. before this process works well

Marli Schoeman: Another one that we're investigating very seriously is blade painting is where you paint one of the blades on the turbine at different color and that is to create contrast when the birds see what has been coined as smear motion. So when the turbine, the blades turn and the bird just see kind of a blur. So the idea is that blur is kind of interrupted with this different color that they can see turning. So this has been trialed in Norway very successfully for the Target species. It was a specific kind of eagle that they were targeting and it reduced their fatalities with a hundred percent for this specific species.

Adriaan Buys: Wow.

Marli Schoeman: And all birds fatalities were reduced by 70% So in this specific case study,...

Adriaan Buys: wow.

Marli Schoeman: it was very successful. It has never been tested In South Africa one wind farm has started implementing it and they're currently doing the kind of their first year of studies and Jeffreys Bay Wind Farm is we have the goal to kind of join their study. We want to also make the sample size bigger



because otherwise it's going to take seven years to see if it is effective in southern Africa.

00:10:00

Marli Schoeman: And then another one that we're looking at is. automated systems basically include any kind of camera system that's linked to machine learning through AI, and it regulates the turbine or it admits in a noise like a deterrent. So it's either kind of an alarm or it shuts down the turbine and this is also something that hasn't been proven or reviewed in the southern African context. But we hope to kind of trial it and see if it works. I'm losing you slightly. So I'm just gonna give it a second.

Adriaan Buys: Yeah, and it's working. Don't worry. Yeah, so it's every now and then I just see a little bit of a buzz there, but I think we've got the gist of that. I think that's a major link that you're going through to try and look after this bird. I think to me from what it sounds like and certainly from reading what I've seen that you guys are doing you mentioned I think the one thing I just wanted to ask a question and I think it's important. that the research I know you are sponsoring the research and the research is the way to help mitigate this.

Adriaan Buys: But if it's already been proven in Norway that the blade painting is working. Why can we not just start the blade painting here? Why do we need to research it first? Or I think you did mention that you are wanting to start implementing this as a yeah.

Marli Schoeman: Yeah, that's a good question. So I just want to quickly, correct your wording there. We're not sponsoring the research. we did sponsor trackers to be installed on for Birds, but the research is



completely independent of us. We're just providing all our monitoring data. So we've been doing carcass monitoring on site...

Adriaan Buys: Okay.

Marli Schoeman: since operations began and we've made that research kind of the results public to act they missed the see academics.

Adriaan Buys: he yeah.

Marli Schoeman: And so that's kind of where the research is being done. It's completely sacred from what we are doing. We just get their results.

Adriaan Buys: Okay.

Marli Schoeman: Sorry, and then you had a different question as well that I

Adriaan Buys: Yeah, yeah, so I just wanted to just understand that. If we already know that the blade painting is worked,...

Marli Schoeman: yes the bad thing.

Adriaan Buys: but obviously we need to prove it for these birds. But ...

Marli Schoeman: You'll be surprised...

Adriaan Buys: I think it's important enough of a case to paint the blades first and then do the research and see.

Marli Schoeman: what the main stumbling block is and that is our civil aviation authorities current regulations. So they require the turbines to be painted white. And specifically the blades as well. And so there's no allowance in their regulations for one blade to be painted a different color. We are currently



applying for exemption. And this one went from that has started implementing already. They received exemption. I'm sorry. I need to cough.

Adriaan Buys:

Marli Schoeman: So that's kind of only the stumbling block we have. And then when it comes to operational wind farms, it's a bit different because it's easy to install once the toe or kind of paint the blades if the turbines aren't up in the area, but when they're operational it's a different story, right? You need to shut down those turbines for at least eight hours. You can't only paint one blade you need to because of the weight in balance that will cause just a tiny bit with that speed will make a big difference in the functionality of the turbine. So it means we have to also paint the other blades with a white color kind of give it another layer so that the weight balance stays the same. And I mean this is just on one turbine. So it's a big Endeavor to go and implement this on an operational info.

00:15:00

Adriaan Buys: Sure, I definitely does sound like it. thank you very much, and I'm looking forward to publishing the article and thank you very much for taking this time and try and explaining to how it works I think to me. It's a fascinating case. Like I say It's often. the excuse that is used and when we're looking at Greener technology and Greener energy production, and it's definitely to me as a conservationist environmentalist and a person mainly focused on biodiversity.

Adriaan Buys: It's definitely heartwarming to unto to see that amount of effort that goes into preserving biodiversity and preserving this important species. So



thank you very much for taking the time and I really appreciate that. Thank you. Marli.

Marli Schoeman: Thank you. And before you just stop it, I just want to also give some credit to all the other players in the industry. I mean I mentioned now the CIA with their regulations and we have been engaging with them directly and they're absolutely acknowledged that this is an issue and we kind of been working together and then at the same time birdleaf essay has constantly supporting us. So we are the South African wind industry industry Association. And they're also involved. So it's not like Jeffreys Bay win.

Adriaan Buys: fantastic Thanks so much. Thank you very much.

MORE VIDEOS

Interview: Sea Shepherd Founder Paul Watson's Eco-Warrior Journey: Reveals All Book 'Hitman for the Kindness Club'

Taking Action for a Healthier Planet: Key Insights from Dr. Erlijn van Genuchten's New Book

Saving the Forest with Love: Conversation with Leif Cocks from the Orangutan Project

Huatulco Plastic Fishing Tournament Interview With Enrique & Luis

