



**environment, forestry
& fisheries**

Department: Environment, Forestry
and Fisheries
REPUBLIC OF SOUTH AFRICA

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APPEAL RESPONSE REPORT

PROJECT NAME/TITLE:

THE 140MW BOULDERS WIND ENERGY FACILITY

PROJECT LOCATION:

SALDANHA BAY LOCAL MUNICIPALITY WITHIN THE WEST COAST DISTRICT MUNICIPALITY, IN THE WESTERN CAPE PROVINCE

PROJECT REFERENCE NUMBER:

EA14/12/16/3/3/2/1057

DATE PROJECT/ACTIVITY AUTHORISED:

17 MAY 2021

DATE NOTIFIED OF DECISION:

DETAILS OF THE APPELLANT	DETAILS OF THE APPLICANT
Name of appellants: Mr Peter Pickford; Cape Columbine Conservancy; The Grootpaternoster Home Owners Association; and The Shelly Point Home Owners Association.	Name of applicant: Vredenburg Windfarm (Pty) Ltd
Appellant's representative (if applicable): Carel Johannes Hofmeyr, Hofmeyr Attorneys	Applicant's representative (if applicable): CES Environmental and Social Advisory Services (EAP)
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GROUNDS OF APPEAL	RESPONDING STATEMENT BY THE APPLICANT	COMMENTS BY THE DEPARTMENT
<p>1. Lack of expertise in the author(s) of the Avifaunal Impact Assessment.</p> <p>A. PERTINENT CONSTITUTIONAL AND STATUTORY PROVISIONS</p> <p><u>The Constitution of the Republic of South Africa, 1996</u></p> <p><i>Section 24 - Environment</i></p> <p>15. Section 24(b) of the Constitution of the Republic of South Africa, 1996 ('the Constitution') enjoins the State to adopt reasonable legislative and other measures to:</p> <p>15.1. prevent pollution and ecological degradation,</p> <p>15.2. promote conservation; and</p> <p>15.3. secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.</p> <p>16. Whilst section 24 recognises the need for development, it states clearly that development must</p>		

happen in a context where ecological degradation is prevented, and conservation is promoted.

Section 33 – Just administrative action

17. Section 33 of the Constitution entitles everyone to administrative action, that is lawful, reasonable, and procedurally fair.

18. A decision to issue an environmental authorisation, constitutes administrative action, and as such it must comply with the requirements set out in section 33.

19. The requirement that administrative action must be reasonable is a multi-faceted one but for purpose of this appeal the essence thereof is that a decision must be supported by the evidence and information that is before the decision-maker and the reasons given for it. If it is not so supported, the decision will be unreasonable and invalid.

20. The requirement that administrative action must be procedurally fair, entails at the very least, that everyone affected by a decision should be afforded a fair opportunity to be heard before a decision is taken, and that the decision-making must be reasonably perceived to be impartial. If this fundamental

requirement is not met, the decision will be procedurally unfair and invalid.

21. Section 33(3) enjoins national government to enact legislation to give effect to the rights entrenched therein. The legislator's response was the Promotion of Administrative Justice Act, 32 of 2000, and we canvass the most important provisions in that Act in paragraphs 27 to 29 below.

Section 39 – Interpretation of Bill of Rights

22. Section 39(2) of the Constitution enjoins all organs of state to promote the spirit, purport and objects of the Bill of Rights when interpreting legislation. This duty rests on the competent authority in terms of NEMA when exercising the regulatory functions entrusted to it in terms of that Act. There is an obligation, therefore, on the competent authority to interpret its legislated power to issue or refuse environmental authorisations in a way that prevents ecological degradation and that promotes conservation.

National Environmental Management Act, 107 of 1998

23. Section 2 of NEMA records a number of principles that must inter alia:

<p>23.1. serve as guidelines with reference to which all organs of state must exercise any function when a decision in terms of NEMA or any statutory provision concerning the protection of the environment is taken;</p> <p>23.2. guide the interpretation, administration and implementation of NEMA, and any other law concerned with the protection or management of the environment.</p> <p>24. One of the principles entrenched in section 2 of NEMA is that development must be socially, environmentally and economically sustainable – in short, it promotes sustainable development.</p> <p>25. Section 2(4)(a) stipulates that sustainable development requires the consideration of all relevant factors, and lists a number of specific considerations, including</p> <p>25.1. That the disturbance of ecosystems and loss of biological diversity are avoided, or, where they cannot be altogether avoided, are minimised and remedied;</p> <p>25.2. that pollution and degradation of the environment are avoided, or, where they cannot be altogether avoided, are minimised and remedied ;</p>		
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<p>25.3. that a risk-averse and cautious approach is applied, which takes into account the limits of current knowledge about the consequences of decisions and actions (this principle is commonly referred to as ‘the precautionary principle’).</p> <p>26. Appendix 6 to the Environmental Impact Regulations, 2014 – GN R982 of 2014 (‘the Regulations’) sets the criteria that a specialist report must, in terms of Regulation 19(8), meet. It stipulates in item 1(1)(a) as one of the requirements of a specialist report, that it must contain details of</p> <p>26.1. The specialist who prepared the report; and</p> <p>26.2. the expertise of the specialist to compile a specialist report including a curriculum vitae.</p> <p>The Promotion of Administrative Justice Act, 3 of 2000 (“PAJA”)</p> <p>27. Section 3(1) of the Promotion of Administrative Justice Act, 3 of 2000 (‘PAJA’) stipulates that administrative action which materially and adversely affects the rights or legitimate expectations of any person, must be procedurally fair. The rights that may be so affected, includes the right to have the environment protected through reasonable legislative and other measures, that</p>		
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<p>prevent ecological degradation, and that promotes conservation.</p> <p>28. Section 3(2)(b) of PAJA lists a number of minimum requirements that must be met for administrative action to be procedurally fair. They include that a person whose rights or legitimate expectations may be adversely affected by administrative action must be afforded a reasonable opportunity to make representations to the decision maker before a decision is taken.</p> <p>29. In terms of section 6(2), an administrative decision may be set aside by a court under certain circumstances, including if:</p> <p>29.1. Relevant considerations were not taken into account</p> <p>29.2. The decision was taken arbitrarily or capriciously ; or</p> <p>29.3. The decision is not rationally connected to the information before the decision-maker</p> <p>B. GROUNDS OF APPEAL</p> <p>30. It is submitted that the decision to issue the EA did not comply with the constitutional, and statutory, framework summarised above. We say so</p>		
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<p>on the following grounds, each of which will be canvassed separately in the paragraphs that follow:</p> <p>30.1. Lack of expertise of the author(s) of the AIA ;</p> <p>30.2. Failure to make relevant information available to stakeholders;</p> <p>30.3. Flaws in the impact assessment; an</p> <p>30.4. Failure to adhere to the precautionary principle</p> <p><i>Lack of expertise of the author(s) of the AIA</i></p> <p>31. Item 1(1)(a) of Appendix 6 to the Regulations stipulates that the 'details of the specialist who prepared the report; and the expertise of that specialist to compile a specialist report including a curriculum vitae' must be provided as part of the report.</p> <p>32. The objective with the abovementioned requirement is evidently to ensure that the information gathered, and the findings and conclusions made, come from an authoritative source, so that all stakeholders can accept that the factual basis for the report is accurate, and that the conclusions are logically and scientifically sound. If the expertise of a specialist is not beyond reproach, his/her report cannot be relied upon by I&AP's, by the EAP, who</p>		
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must compile the EIR, and, ultimately, by the competent authority, charged with the decision-making powers under NEMA.

33. The requirement that details of the specialist's expertise must be provided in the report surely requires of the specialist to disclose more than just a general statement of expertise that could notionally be of relevance to a project of this kind. It must, as a minimum, set out what the relevant specialist's involvement entailed in other comparable projects or research initiatives that s/he believes equips him / her to:

33.1. accurately gather the baseline information required to construct a credible factual basis for further assessment of the impacts of a particular activity; and

33.2. accurately analyse the baseline information, to draw scientifically defensible conclusions, and to make rationally sound recommendations based on those conclusions.

34. The BioInsight team comprises of a group of professionals, who, judging by their academic qualifications, are well-qualified in their respective fields, and at least the lead investigator seems to have significant international working experience. What is

of interest for present purposes, though, is whether the team has the required expertise that qualifies them to compile this particular report. As we explain below, this detail has been, and remains, undisclosed.

35. Whilst the AIA is a collaboration of the work of various specialists, it gives a very short summary of the expertise of one member of the team only, Mr Miguel Mascarenhas, who we assume is the person that is referred to in the responses to stakeholders' representation as 'the lead investigator'.

36. Apart from his academic qualifications, seemingly all from foreign academic institutions, very little information is provided about Mr Mascarenhas' expertise, and it can by no means be described as 'detailed'. Although it is stated that Mr Mascarenhas 'has experience with bird interactions with renewable projects, namely energy infrastructure for more than 6 years' and that he 'has been involved in impact assessment and ecological monitoring for over 100 projects, at least 50 of which involved onshore wind energy generation in South Africa', it is not stated at all:

36.1.1. What the 'experience with bird interactions with renewable projects' entailed;

<p>36.1.2. What his 'involvement' in any of the 50 projects involving onshore wind energy generation in South Africa entailed;</p> <p>36.1.3. What expertise he acquired in the projects that he has been involved in that equips him to undertake this very sensitive assessment, and to respond authoritatively to the fundamental criticisms raised by the likes of Drs Andrew Jenkins and Rob Simmons.</p> <p>36.2. Whilst it is a mandatory requirement in terms of item 1(1)(a) of Appendix 6 to the Regulations that the curriculum vitae of the author of a specialist report must form part of such report, Mr Mascarenhas' CV was not enclosed in the AIA.</p> <p>36.3. No information, let alone detail is given of the relevant qualifications or expertise of the persons who performed the field surveys, in other words, the persons who collected the baseline information. Whilst BioInsight maintains that the field observations were conducted by two specialists, the only indication of who may have performed the surveys, is a note in the table on page 3 of the AIA, identifying Mr Craig Campbell as 'field observer'. We assume that he was somehow involved with the field surveys, but apart from his academic qualifications (a BSc in Conservation Ecology), stakeholders, including the</p>		
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competent authority, are left in the dark about his expertise and ability to accurately gather the baseline information.

36.4. The baseline surveys are the very foundation of the avifaunal assessment and require relevant knowledge and expertise. Without properly identifying the person who performed the field survey, and in the absence of a recordal of their expertise, the assessment in its entirety lacks the necessary authority, and, by extension, the integrity of any decision taken in reliance thereon must be questioned.

36.5. The uncertainty extends also to the much relied upon radar report, which we understand had been prepared by one Milliken in 2015 ('the radar report'). When the findings of this report were questioned, BioInsight referred, in response, to the preliminary work done by a 'biologist', which, if we understood them correctly, served to corroborate the accuracy of the findings in that report. Particularly in light of the weight attached to this report, the work done by the 'biologist' is of critical importance to the AIA, the EIA and ultimately the competent authority's decision, and his/her expertise cannot be left undisclosed and uncorroborated. However, the 'biologist' is neither identified, nor is any mention made of his/her expertise, and very little is said about

the nature of the work that s/he has undertaken. The dearth of information about the person upon whose work the integrity of the radar report hinges, calls into question the credibility of any recommendations, findings and decisions that are based on it.

36.6. In summary of the above: Where neither the field observers' identity or expertise, nor the identity, expertise or scope of work of the 'biologist' upon whose preliminary survey the radar report relies, is recorded and available for scrutiny, each and every finding of theirs stands on shaky ground. The doubt that this uncertainty casts, extends to all the fundamental baseline information, including the listing of species observed, their abundance, nesting sites and habitats, movement patterns, their flight paths (including height of flight) and general behaviour.

37. The BioInsight team has had ample opportunity to place the expertise of their team beyond reproach, as we explain below:

37.1. First, they had the opportunity to properly record the expertise of their team in the AIA itself, but as we have indicated above, they failed to do so.

37.2. Then, during the public participation process, several objectors questioned the expertise both of the field surveyors and of the team generally, but as

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<p>recorded in the comments and response tables, BioInsight's response remained evasive. Their very general response to Dr Andrew Jenkins' specific challenge of the expertise of the BioInsight team, was that '... the lead specialist investigator is registered as a professional member in compliance with the Natural Scientific Professions Act of 2003 which aims to "Provide for the establishment of the South African Council of Natural Scientific Professions (SACNASP)".' and they explained why they believe the international experience of their team is advantageous. They fail to this day, though, to give any detail of Mr Mascarenhas' specific expertise or of the credentials of the technical survey team (and of the biologist who undertook the preliminary surveys leading up to the radar report).</p> <p>38. In stark contrast to the uncertainty that prevails regarding the expertise of the BioInsight team, the representatives for the Appellants have throughout the process consulted the foremost authorities in the country on avian impact assessment and threatened raptors. They did so with a view to making meaningful contributions towards informed and conscientious decision-making that gives effect to the prescripts and principles of environmental legislation.</p>		
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<p>39. For purposes of context and by way of background we give below a brief summary of the qualifications of the respective specialists, Drs. Andrew Jenkins and Rob Simmons:</p> <p>39.1. Dr Jenkins, of AVISENSE Consulting, is a qualified ornithologist with more than three decades' experience as a field biologist and as a specialist in avian impact assessment in southern Africa. He has an extensive publication record in peer-reviewed academic journals on aspects of raptor and avian collision ecology, and in fact is the primary author of the Birdlife South Africa/Endangered Wildlife Trust Best Practice Guidelines for Birds and Wind Energy document for assessing the impacts of wind farms in south Africa on birds. The latter document was referred to and relied on by BioInsight in the preparation of the AIA. Mr Jenkins has also been involved in the screening, scoping, baseline, Environmental Impact Assessment ('EIA') and post-construction bird studies for more than a hundred wind farm proposals in multiple African countries .</p> <p>39.2. Dr Simmons is an ornithologist specializing in threatened species including Black Harriers, with 35 years' experience in avian research and impact assessment work. He has authored and contributed to over 110 peer reviewed publications, and is co-author of the Black Harriers and Wind Energy:</p>		
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Guidelines for impact assessment, monitoring and mitigation, published in July 2020 ('the Guidelines') which expands on the recommendations in the Best Practice Guidelines referred to in paragraph 39.1 above. A copy of the Guidelines is attached hereto for ease of reference marked Annexure 'G'.

39.3. Both Dr Jenkins and Dr Simmons studied the AIA closely and noted a number of statements that were erroneous or misleading, which are listed below:

39.3.1. Reference was made to coastal species that might be inclined to travel overland through the development area on page 16 para 7 of the AIA, but BioInsight has failed to include the Swift Tern, a far more likely species to commute through the wind farm in numbers, particularly at night;

39.3.2. Reference is made on p17 at para 3 of the AIA to trees as habitat refugia for species such as the Sickle Winged Chat and the Cloud Cisticola when in fact both of these species are essentially ground dwelling, open country species highly unlikely to make use of trees at any time;

39.3.3. Suggestion is made on p41 at para 3 of the AIA that Jackal Buzzard collisions at West Coast One Wind Farm may be associated with the presence of natural vegetation, however this is demonstrably not

<p>the case and to establish a connection between collision risk and the vestigial patches of natural vegetation is potentially misleading;</p> <p>39.3.4. Reference to the possibility of the Lesser Kestral breeding in the Paternoster area on p42 at para 4 of the AIA is patently incorrect.</p> <p>40. It is submitted that the above-mentioned errors demonstrate a lack of familiarity with South African birdlife and adds to the uncertainty about the accuracy and reliability of the information provided, and the conclusions drawn in the AIA.</p> <p>41. These concerns, which speak to the quality of the impact assessment performed by BioInsight, are all the more worrying if they are considered in light of the inaccuracies contained in another avifaunal report prepared by BioInsight as part of the EIA for the proposed Goereesoe Wind Farm ('the Goereesoe application') in 2015.</p> <p>42. The facts of the Goereesoe application show many similarities to the present application and it is instructive to consider same herein:</p> <p>42.1. Both applications relate to wind farms intended to be developed in areas populated by sensitive avifaunal species, in the instance of the Goereesoe application, the area was home to a Cape</p>		
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<p>Vulture breeding colony, Black Harriers (both species are Endangered), Secretary birds and Blue Cranes, amongst others;</p> <p>42.2. Both applications were intended to be developed on land neighbouring on existing wind farms (in which mitigation measures had been put into place for the management of avifaunal impacts);</p> <p>43. The BioInsight report in the Goereesoe Application was the subject of much criticism, amongst others from Dr Odette Curtis-Scott, the Director of the Overberg Lowlands Conservation Trust. She identified several inaccuracies and inconsistencies, for example, the report included species that weren't likely to be found in the area and excluded some that would be, demonstrating a lack of familiarity with the Overberg area which was being studied. Other, more serious flaws, included the following:</p> <p>43.1. Even though Goereesoe falls within the recorded foraging range of a Cape Vulture breeding colony, and in this instance the only healthy and growing colony in the country, within which area wind farms are not to be developed, the BioInsight report stated that as Cape Vultures were not observed using the development area, no direct collection was expected to occur. On visiting the site, however, Dr</p>		
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<p>Curtis-Scott observed five vultures flying over the development area on two occasions, often at rotor height, on the 2nd day of observation;</p> <p>43.2. The BioInsight report claimed that Black Harriers were unlikely to breed in the development area or surrounds, however on subsequent site visits Dr Curtis-Scott observed a Black Harrier flying at rotor height and found a nesting sight establishing that they do breed in the area. Dr Simmons confirms in his note recording his responses to the comments made by the Applicant in the Appeal Decision of 30 August 2020, a copy of which note is attached marked Annexure 'H', that he and Dr Curtis-Scott have since located no less than 8 breeding pairs in this area.</p> <p>44. We annex hereto (Annexure 'I') a copy of a statement that Dr Curtis-Scott prepared in response to an appeal lodged by the applicant in the Goereesoe application, wherein the errors referred to above are canvassed in more detail.</p> <p>45. It bears mentioning that the reasons that the competent authority gave for its decision not to grant environmental authorisation for the Goereesoe wind farm, included that:</p> <p>45.1. 'The proposed site is unsuitable based on its proximity (30km) to the Cape Vulture breeding colony</p>		
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<p>at Potberg and international experience shows that vultures are very vulnerable to collision with turbines and the impact would be very difficult to mitigate due to the birds moving through the wind farm on a regular basis.'</p> <p>45.2. 'The area is within an IBA which supports abundance of bird species of conservation concern in the area'</p> <p>45.3. 'Given the potential adverse threats posed by the project, the lack of assessment of location alternatives, the fatal flaw identified in the avifaunal and botanical assessment conducted as part of the EIAr dated February 2015, and the concerns raised by Interested and Affected Parties that the proposed facility not be constructed; the proposed development on the current site is not supported.' (emphasis added)</p> <p>46. A copy of the Goereesoe decision is annexed hereto (Annexure 'J'). Your attention is drawn to paragraphs d), e) and i) in particular.</p> <p>47. The fundamental errors in baseline studies conducted by BioInsight - which studies should be the foundation for all subsequent work, reporting and decision-making - and the reasonable expectation that further errors may have been made that have not</p>		
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<p>been discovered yet, dictates that the AIA itself, and by extension the EIAR ought to be read with great circumspection.</p>		
<p>2. Failure to make relevant information available to stakeholders.</p> <p><u>NOTE: Please read paragraphs 15 to 29 at item 1 above together with the paragraphs below.</u></p> <p>48. Closely related to the Appellants' concerns regarding the BioInsight team's expertise, are their concerns about the lack of information made available to stakeholders.</p> <p>49. Dr Jenkins, for instance, criticised the AIA for its general references, without substantive quantification to, for example, low sighting frequencies, minimal numbers of flights through the study area or through the rotor swept area, and the low risk of impact for established priority species. He was critical, furthermore, of the fact that the radar report, upon which much reliance was placed, did not form part of the AIA or the documents freely available to stakeholders. In response, BioInsight did not provide the required quantification or the report; it stated instead that the detailed information is contained in the final Monitoring Report for Boulders WEF pre-construction phase (referred to further</p>		

<p>herein as ‘the BioInsight Monitoring Report’), which they said can be obtained, together with the radar report from ‘the client’ . A similar response is given to other requests by Dr Jenkins for findings and information underlying the conclusions drawn by BioInsight.</p> <p>50. As far as the radar report is concerned, Dr Jenkins highlighted the difficulties with distinguishing different groups of birds of individual species from the mass tracking data generated by a study of the kind adopted in this assessment, especially for different birds of smaller sizes. He pointed out that the level of resolution claimed in the AIA was not achieved in either the pre-or post-construction radar studies carried out by the same service provider in respect of the neighbouring West Coast One wind farm. He expressed the opinion that due to the absence of even a superficial explanation of the way in which key species or groups of species were filtered from the generic matrix of radar detected flight tracks, any conclusions of the baseline study (and hence the impact assessment) should be considered questionable. BioInsight Responded to this criticism as follows:</p> <p>‘according to information supplied in the report (Millikin, 2015), a biologist observed movements of all birds through the area. These observations provided</p>		
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<p>confirmed species identification or radar flight paths for calibration of the radar. Calibration was done by using many flights of several co-observed species. Additionally, the specialist notes that the referred Radar Report (Millikin, 2015), is not the property of the specialist team and thus we cannot distribute it. Please request to obtain directly from the client.' (emphasis added)</p> <p>51. BioInsight's response is problematic on several levels:</p> <p>51.1. It must be noted, firstly, that the bird specialists do not contend that the information in the reports is irrelevant and /or will not lead to a better understanding or assessment of the AIA. They, therefore, do not dismiss the claim by the relevant I&APs that insight into those reports would afford stakeholders, including the competent authority, a better understanding of, and will enable them to better assess, the conclusions in the AIA.</p> <p>51.2. The BioInsight team appear to have relied entirely, without independent verification, on the findings of the radar report. This would have been less of a problem if that report were not challengeable as a stand-alone document. However, the integrity of the radar report hinges on initial observations, which according to that report itself was done by an</p>		
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unidentified biologist, whose independence or expertise in ornithology is neither claimed, nor corroborated. The very genesis of the radar report is therefore clouded by uncertainty.

51.3. The philosophy underlying the requirement that an independent person must manage the EIA process, and that specialists must be independent, is the notion that there must be 'distance' between the developer / applicant and the environmental process, and between the developer / applicant and IA&APs. It is that 'distance' that lends legitimacy to a process that must assess the environmental impacts of a proposed activity without any interference or influence by the person who stands to benefit from an approval or to be prejudiced by a refusal. In this context, it is untenable that the developer is made the gatekeeper of information that is critically important for a proper understanding and interrogation of significant environmental impacts. Neither the EAP, nor the specialist can be heard to say that a document as important as the radar report and / or the BioInsight Monitoring Report is the property of the developer, that the EAP or the specialist may not make it available to stakeholders, and that they must approach the developer if they wish to have insight into it.

<p>51.4. If the developer holds the key to documents and information that must inform the competent authority's decision-making and other stakeholders' appreciation of the matters at issue, an apprehension that the report is either influenced by bias or that its results are reported on inaccurately or selectively, would be justified.</p> <p>51.5. The failure to provide I&APs with pertinent information and documentation, deprives them of their right, in terms of section 3(2)(b) of PAJA to a reasonable opportunity to make representations to the decision-maker before a decision is taken.</p> <p>51.6. The failure to provide the competent authority with the said information and documentation, renders its decision susceptible to judicial challenge because:</p> <p>51.6.1. relevant considerations will not have been taken into account; and</p> <p>51.6.2. a decision taken without regard to all relevant considerations will be arbitrary and capricious.</p>		
<p>3. Flaws in the Avifaunal Impact Assessment</p> <p><u>NOTE: Please read paragraphs 15 to 29 at item 1 above together with the paragraphs below.</u></p>		

<p><u>Impact of Fatalities</u></p> <p>52. The AIA states, at page 53, that 'based on the data analysed and the knowledge made available, the proposed development is not suspected to result in any unacceptable loss or impact as a result of the cumulative effect of the three projects (Boulders Wind Farm, West Coast One Wind Farm and Isivunguvungu Wind Farm) ...as long as the appropriate avoidance/mitigation measures are implemented.'</p> <p>53. This statement was echoed by the Competent Authority in the Appeal Decision of 2020 which claimed that 'the Avifauna studies prepared by BioInsight and GAIA Environmental Service, states that with the implementation of proposed mitigation measures provided in the EIAr, the project will not cause irreplaceable loss of avifauna and as such, no fatal flaws were identified in the project' and was subsequently adopted verbatim by the Appeal Authority.</p> <p>54. The above demonstrates a fundamental misconception as to the sensitivity and nature of the endangered bird population. Black Harriers are the scarcest endemic raptor in southern Africa (there are only an estimated 10000 individuals in the global population) , and the Cape Columbine area is one of</p>		
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<p>the few areas in South Africa where Black Harrier sightings have increased.</p> <p>55. Black Harriers have recently been found to be highly susceptible to impacts with turbines and in South Africa a number of fatalities have been reported as a result of collisions with wind turbines – in fact at one Eastern Cape WEF with 60 turbines, 5 Black Harrier fatalities were recorded in only 4 years. Population viability modelling of Black Harriers predicts that if 5 wind farms were to kill one juvenile or adult every second year the population would decline by 19% in 50 years, and if it killed a higher rate of 3 adults every second year then it would decline by 50% in 50 years. Therefore, any Black Harrier killed at a wind farm in South Africa will affect the global population and as such, the species can afford no losses.</p> <p>56. BioInsight states that the Black Harrier population currently has a declining trend independent of wind farm impacts, but acknowledges that wind farms may be an aggravating factor if significant fatalities occur and if negative impacts are proven to compromise the viability of the Black Harrier population during the lifetime of a wind farm. This qualified statement is both misleading and demonstrative of a lack of appreciation for the gravity of the threat: to a population in decline any additional</p>		
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fatalities, not just those that fall within the narrow category described above, would be a major aggravating factor.

57. The AIA makes frequent reference to low sighting frequencies, and to minimal numbers of flights through the study area or through the rotor swept area of the proposed turbine layout, however they apparently did not have regard to the following:

57.1. the Cape Columbine area, in which the proposed development area for the BWEF is found, falls within the highest habitat suitability category for the Black Harrier (out of just 7 such areas in the country); and

57.2. As Dr Simmons predicted in his specialist report (January 2020) , he has since located an active Black Harrier nest within the eastern section of the Groot Paternoster reserve, on 15 October 2020, with another nest suspected but unconfirmed due to the presence of nest predators. In the addendum to his 2021 report, Dr Simmons demonstrates that the significance of this lies in the fact that Black Harrier breeding has now been confirmed within a 5km radius of the proposed Boulder's WEF (see Figure 1). It should also be noted that, as per Dr Simmons's original report, nests may therefore be found much closer to the proposed site, particularly as suitable

<p>breeding habitat was found on the border between the proposed Boulders WEF and the existing West Coast One WEF.</p> <p>58. A similar misconception can be found in the Goereesoe application where the applicant argued that it had proposed various mitigation measures which would reduce the impact on the Cape Vulture to an acceptable level. It was pointed out by Dr Curtis-Scott, though, in the statement referred to in paragraph 44 above, that there is no 'acceptable' level of deaths to Cape Vultures and other red-listed species, and any such colony that show signs of population growth should be accorded as much protection and support as possible.</p> <p><u>Inappropriate mitigation measures</u></p> <p>59. The Competent Authority stated in the appeal that the AIA-proposed mitigation measures are based on international standards, the author's expertise and follow the general indications in the 'recent' publication 'Birdlife South Africa and Endangered Wildlife Trust recommended conditions of approval for all wind energy facilities to monitor and reduce potential impacts on avifauna' (Birdlife South Africa & EWT 2015).</p>		
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<p>60. It goes on to list the mitigation provisions proposed for sensitive areas:</p> <p>60.1. A 200m NO-GO buffer around areas of drainage lines and natural vegetation used by raptors and other sensitive species, noting that this is intended to acknowledge and account for the fact that natural vegetation is important for endangered species such as the Black Harrier;</p> <p>60.2. A 200m NO-GO buffer around water bodies, to account for sensitive species such as Flamingos; and</p> <p>60.3. A 500m NO-GO buffer and 2000m medium sensitivity buffer around the active Secretarybird nest.</p> <p>61. BioInsight have acknowledged that the broader area is known for the breeding of certain species such as the Black Harrier, and that the natural vegetation was relevant for same, and indicated that, based on the data gathered, they defined and buffered the sensitive areas with a 200m buffer. It is submitted that these suggested mitigation measures are entirely inappropriate for red data species, and particularly for the Black Harrier.</p> <p>62. The Guidelines recommend that the development of wind turbines within areas where Black Harrier are likely to occur should be</p>		
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<p>discouraged unless it is confirmed through rigorous monitoring that the proposed site is not used for breeding, roosting, foraging or migration. They advise that the most important mitigation measure to reduce the risk wind farms pose to Harriers is to exclude turbines from core breeding areas.</p> <p>63. The Guidelines, however, suggest a nest buffer of 5km which should be considered to be of high sensitivity and turbines should only be placed in this buffer if there is good evidence that Black Harriers do not regularly use the area, and they further recommend a very high sensitivity buffer of 3km where no turbines should be permitted. These recommendations are obviously of direct relevance to the proposed Boulders WEF following the confirmation of breeding Black Harriers within a 5km radius of the development site, with potential additional nests in the area.</p> <p>64. Nest buffers around Black Harriers are proposed for purposes of, amongst others, protecting recently fledged birds from collision risk, limiting disturbance during breeding, reducing the risk of collision and displacement and avoiding areas where most risk (rotor height) flights are likely to occur.</p> <p>65. The Guidelines advise that 'development of wind turbines within areas where Black Harrier are</p>		
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<p>likely to occur ... is discouraged, unless it is confirmed, through rigorous monitoring ... that the proposed development site is not regularly used for breeding, roosting, foraging or migration.' It cannot be said in the context of the specialist studies conducted by BioInsight that rigorous monitoring has taken place, in fact they were either unaware of the presence of breeding Black Harrier in close proximity to the site or failed to bring it to the attention of the competent authority, nor can it be said that they have proposed appropriate mitigation measures in line with a precautionary approach.</p> <p><u>Turbine height</u></p> <p>66. In considering the fatality estimates for the BWEF, Dr Simmons points out that the AIA has not taken into account the effect of turbine height on avian fatalities which is problematic because the planned turbines have a 120-m hub height which are predicted (per a study by Loss et al 2013 figure 2) to kill three-fold more birds per year than those with 80-m hub height (as at West Coast One Wind Farm).</p> <p>67. In response to the above, BioInsight indicated that while it was aware of the research referred to, it relied on a number of other studies</p>		
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<p>which found that no relation exists between bird fatalities and turbine heights.</p> <p>68. Dr Simmons has, however, since advised that this is misconstrued and that the study by Loss et al 2013 is the largest such study and that it is more significant and accurate than the studies referred to by BioInsight. The reason for this is that the Loss et al. report excludes studies that use lattice towers, whereas the studies referred to by BioInsight include same. The impacts of lattice towers (which are known to increase bird fatalities) are not directly comparable to those of mono poles (as are contemplated for the Boulders WEF), and as such the inclusion of studies that make reference to studies pertaining to lattice towers renders BioInsight's conclusion - that there is no correlation between hub height and bird fatalities - flawed.</p>		
<p>4.Failure to adhere to the precautionary principle</p> <p><u>NOTE: Please read paragraphs 15 to 29 at item 1 above together with the paragraphs below.</u></p> <p>69. In the context of environmental decision-making, the precautionary principle has at its core, that decision-makers must apply caution when deciding whether or not to permit activities, whose</p>		

<p>environmental impacts are still unknown or difficult to assess.</p> <p>70. In South Africa, this principle must be read and applied in a manner that gives effect to the obligation on the State, in terms of section 24 of the Constitution, to prevent pollution and ecological degradation and to promote conservation. What this means practically, is that a decision-maker must be very cautious of permitting an activity if it is unable, due to a lack of current knowledge, to make an informed assessment about whether the activity might lead to ecological degradation or undermine conservation.</p> <p>71. It is against this backdrop that the following statement in the C&RR, attributed to BioInsight is alarming:</p> <p>“The team is in agreement that bird fatalities may potentially occur, and possibly in numbers that may raise concern</p> <p>However, as stated in response to comment #11 there is always uncertainty surrounding this. Due to this, the bird specialist team highlights that besides following the mitigation hierarchy, one must also use an adaptive management approach when dealing with mitigation strategies, and adjust them whenever</p>		
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necessary, given the monitoring programme results.”
(emphasis added)

72. The remarks quoted above, were made in response to the overwhelmingly negative comments submitted by, amongst others, two of the most respected ornithologists in the country.

73. What is before the decision-maker, therefore, is the following:

73.1. On the one hand, there is a stern warning by some of the foremost authorities on the subject, that a windfarm may have devastating effects on birdlife in the area, including endangered species, and their plea is that environmental authorisation should be refused.

73.2. On the other hand, there is a recommendation by consultants whose expertise is questionable, that environmental authorisation may be granted, even though they say that bird fatalities, ‘possibly in numbers that may raise concern’ may occur. They say that if the fears of bird fatalities, presumably in numbers that raise concern (no indication is given as to what this might mean) materialise, new mitigation measures will be adopted on an ad hoc basis, but they do not say what will happen if the fatalities cannot be mitigated.

<p>74. This is not a precautionary approach; it is an ecological experiment with no guarantees that the adverse consequences that some of the most respected experts in the field warn against, can be prevented or mitigated. It is tantamount to permitting the release of a deadly virus, realising that it may have devastating effects, but allowing it nevertheless in the hope that if the feared effects materialise, someone will be clever enough to develop a vaccine to mitigate the calamity.</p> <p>75. When the decision-maker construes the obligations that the precautionary principle places on it, s/he is enjoined by section 39(2), read with section 24(b) of the Constitution, to do so in a manner that ensures that ecological degradation is prevented and conservation is promoted. It is our submission that if the competent authority adheres to this principle, a decision to grant the environmental approval applied for, would be untenable.</p>		
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ARR comments by Case Officer

Name & Surname:

Date:

Signature:

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Approved by Superior

Name & Surname:

Date:

Signature:

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