

3.8 PRINCIPLES AND GUIDELINES

The specialist in undertaking the VIA should be aware of the following principles and concepts underpinning visual input:

- An awareness that 'visual' implies the full range of visual, aesthetic, cultural and spiritual aspects of the environment that contribute to the area's sense of place;
- The consideration of both the natural and the cultural landscape, and their inter-relatedness;
- The identification of all scenic resources, protected areas and sites of special interest, together with their relative importance in the region;
- An understanding of the landscape processes, including geological, vegetation and settlement patterns, which give the landscape its particular character or scenic attributes;
- The need to include both quantitative criteria, such as 'visibility', and qualitative criteria, such as landscape or townscape 'character';
- The need to include visual input as an integral part of the project planning and design process, so that the findings and recommended mitigation measures can inform the final design and quality of the project.

4 VIEW SIMULATIONS

Below are view simulations from two key vantage points from inside the Great Fish River Nature Reserve and from the Kwandwe Protected Environment. For a full list of viewpoints of the development, please refer to Annexures A to E.

<p>AlbanyWEF - Viewpoint 1 - Adam's Krantz</p>	
	<p>GREAT FISH RIVER GAME RESERVE</p> <p>Adam's Krantz Viewpoint</p> <p>DAY AFTER DEVELOPMENT</p> <p>33°2'3.94"S 26°49'34.95"E Distance: 31km Heading: 221,9°</p>
	<p>GREAT FISH PROVINCIAL NATURE RESERVE</p> <p>Adam's Krantz Viewpoint</p> <p>TWILIGHT AFTER DEVELOPMENT</p> <p>33°2'3.94"S 26°49'34.95"E Distance: 31km Heading: 221,9°</p>
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AlbanyWEF - Viewpoint 2



GREAT FISH PROVINCIAL
NATURE RESERVE
Research Station/Recreational
DAY
AFTER DEVELOPMENT
33°08'09.4"S 26°43'13.6"E

AlbanyWEF - Viewpoint 2



GREAT FISH PROVINCIAL
NATURE RESERVE
Research Station/Recreational
TWILIGHT
AFTER DEVELOPMENT
33°08'09.4"S 26°43'13.6"E

AlbanyWEF - Viewpoint 5 (Kwandwe Protected Environment)



DAY
AFTER DEVELOPMENT

33° 7'2.60"S 26°33'11.70"E
Distance: 13.5km
Heading: 170°

AlbanyWEF - Viewpoint 5 (Kwandwe Protected Environment)



NIGHT
AFTER DEVELOPMENT

33° 7'2.60"S 26°33'11.70"E
Distance: 13.5km
Heading: 170°

5 CONCLUSIONS

Modern wind farms are highly visible structures because of both the height of turbines and their number and geographic distribution in a wind farm.

VIA by and large are comprised of three main considerations:

1. how visible is it from a series of specific viewpoints;
2. how substantial is the impact on viewers;
3. and how much attention should be given to those viewers.

A VIA for a wind farm development has to adequately consider the above and has to be tailored to be fit for purpose and needs to determine visual impact "significance" with respect to both the local as well as regional importance of the landscape and features the landscape is comprised of, the relative pristineness of landscape and features comprising and their contribution to sense of place.

The VIA in the EIR for the Albany WEF did not meet these objectives, is defective and must be rejected at the hand of reasons set out below.

5.1 IDENTIFICATION OF SENSITIVE RECEPTORS AND ZONE OF VISUAL INFLUENCE

Empirical research now available on wind farm visual impact shows a consistent and essentially linear relationship between turbine height, distance and wind farm visual impact. For any degree of visual impact (such as the zone of visual influence, or threshold for visual dominance), if turbine height is doubled, the distance threshold for that degree of impact also typically doubles.

The VIA indicates that "Based on potential sensitivity, visibility and exposure, the following sensitive receptors (Figure 7) were identified within the study area." However, the identification of the receptors is totally inadequate as can be gleaned by comparing the maps prepared by EScience for Indalo (Figure 5-1 and Figure 5-2) to the map within the CES VIA (Figure 5-3).

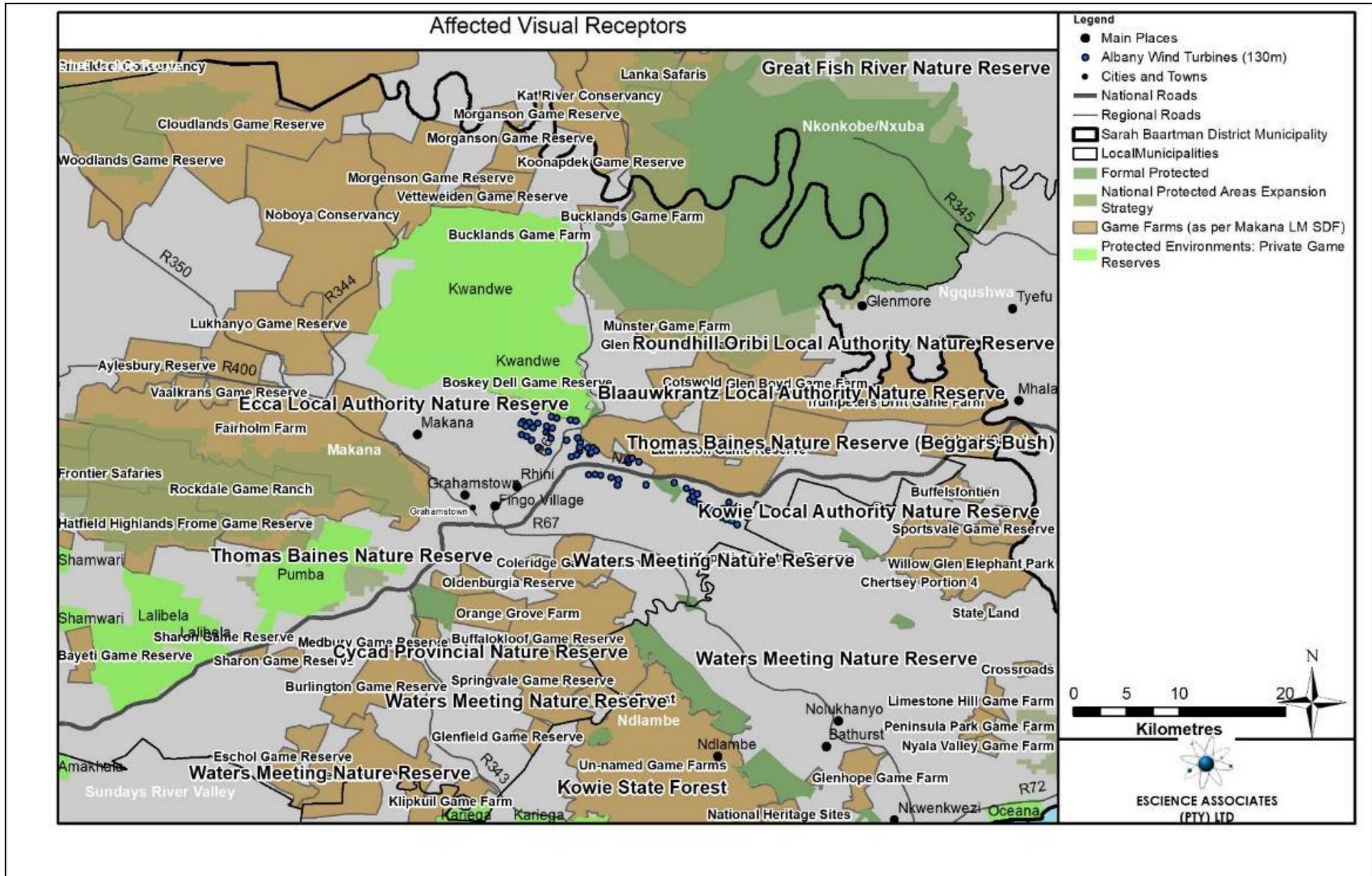


Figure 5-1: Albany WEF Affected Visual Receptors

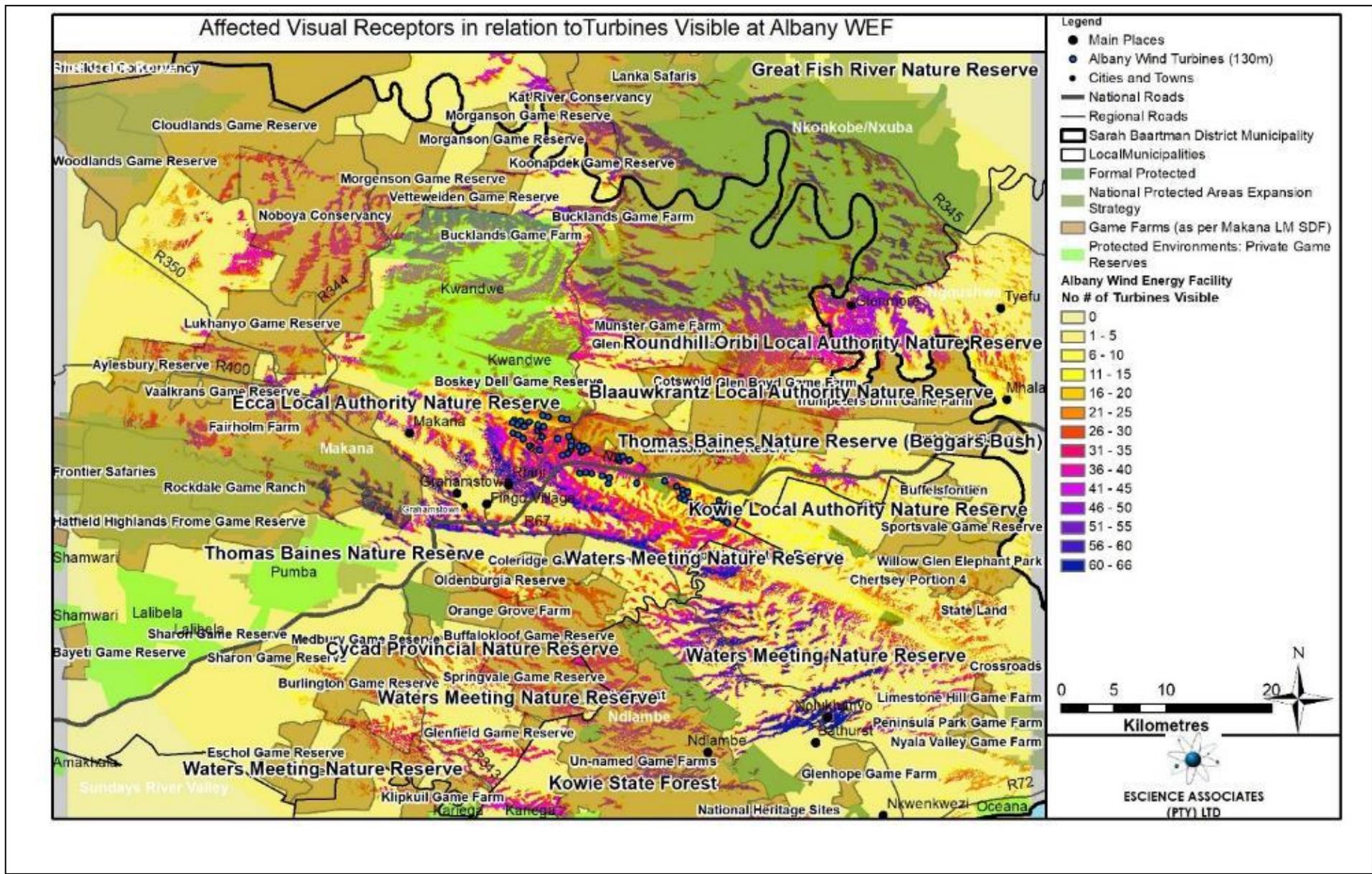


Figure 5-2: Albany WEF Affected Visual Receptors – Number of turbines visible

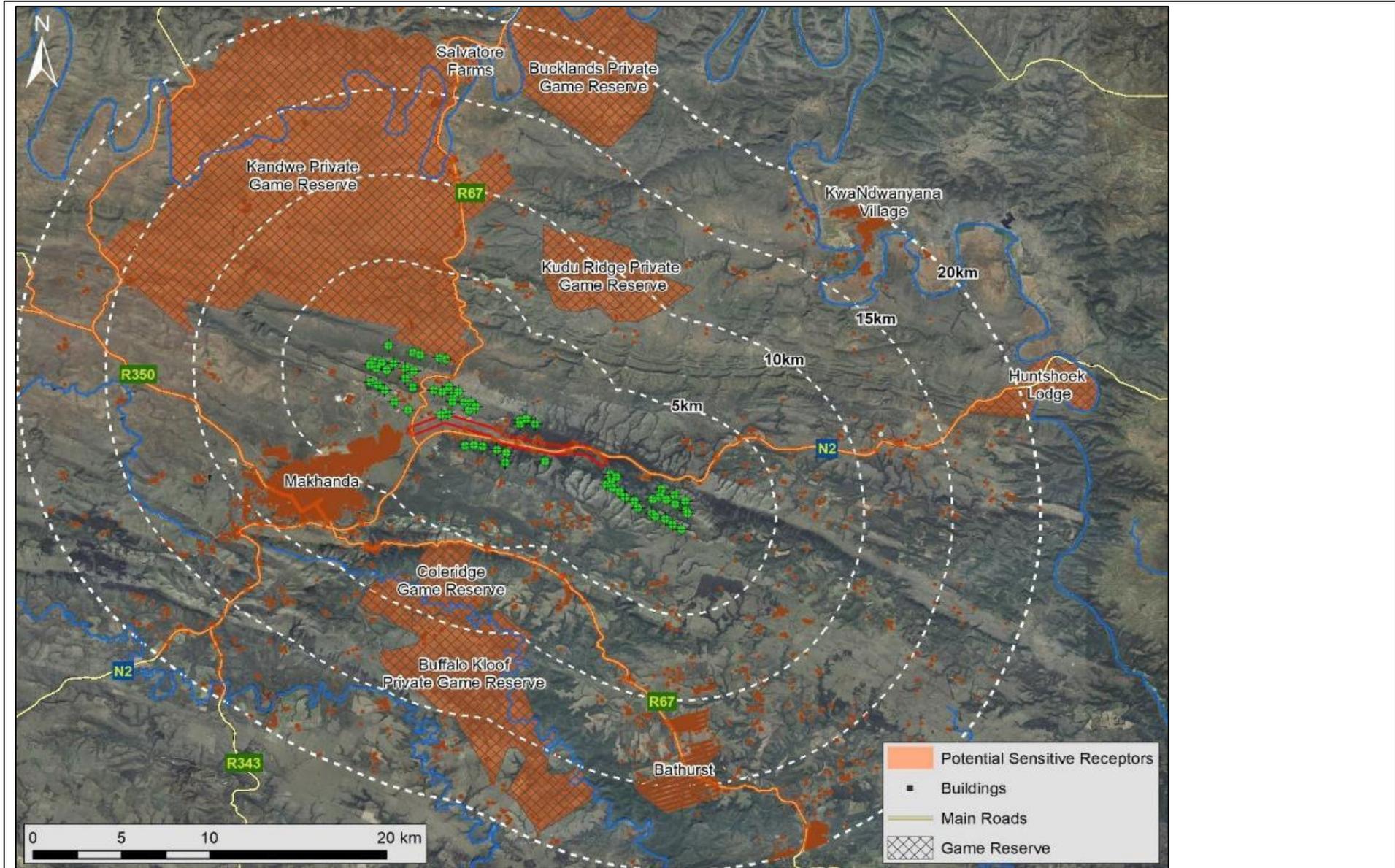


Figure 5-3: Albany WEF Affected Visual Receptors according to CES VIA

5.2 VANTAGE POINTS

Poor selection of vantage points and complete omission of the Great Fish Provincial Nature Reserve are material deficiencies in the Report. The absence of the Great Fish Provincial Nature reserve is conspicuous, and the deficiency is of such a nature that it beggars belief. The actual impact on the Great Fish reserve and the Adams Krans view point as determined by independent specialist alone constitutes a fatal flaw, the aggregated visual impact on wildlife and nature tourism operations in the area would be an externality of fatal proportions.

5.3 ASSESSMENT OF SIGNIFICANCE OF VISUAL IMPACT

Firstly, the EIR omits/ hides the impact to views that generally have both a high scenic and wilderness value that may be appreciated from Great Fish and Kwandwe. Secondly, the EIR specifically hides the impact from a viewing deck constructed in Great Fish for the purposes of appreciating the great and largely unspoilt scenery from Adam's Krans. The view from Adam's Krans has been described as "*The most beautiful landscape in South Africa*"³ and "*The Adam's Krantz viewpoint over the twisting Fish river canyon is one of the most iconic Eastern Cape vistas*".⁴ The failure of the EIR to identify the significant impact of the WEF on the general views of the Great Fish and Kwandwe and specifically on the Adam's Krans view is a material and fatal flaw in the EIR. The proposed WEF is a long linear development spanning 20 km with the Sentech tower having a height of 204 m which creates a significant visual impact on the vistas from surrounding Protected Areas. The viewpoint from Adams Krans in the Great Fish is particularly severely affected. The independent viewsheds that were prepared by EScience for Indalo clearly demonstrate that the WEF takes up two thirds in the middle of the vista from Adam's Krans and will amount to a blight on a landscape of national importance. These undisturbed landscape views form part of the unique wilderness experience for ecotourism to the Great Fish and Indalo Protected Areas that would be permanently disturbed by the WEF. For this reason alone, the application to develop the WEF is not desirable at this location and should be refused by the DEFF.

³ <https://www.grocotts.co.za/2015/02/18/the-most-beautiful-landscape-in-south-africa/>.

⁴ <https://www.visiteasterncape.co.za/parks/great-fish-river/>.

5.4 DEFICIENCIES IN VISUAL IMPACT CONSIDERATION:

Additionally, the following problems with the veracity of the VIA need to be pointed out :

- Turbine blade and their dynamics: The dynamic aspect of wind turbine blade motion has not been considered as a contributor to visual impact whereas Sullivan found that contributed significantly to visual prominence of wind turbines at distances of up to 24 km;⁵ others have identified wind turbine blade as a significant attractor of visual attention and a factor that increases perceived visual contrast from wind facilities.⁶
- Atmospheric perspective: It is well understood that humans judge distance to objects in the landscape in part by assessing the effects of atmospheric perspective, the decrease in contrast between an object and its background as distance increases. As distance increases, the colours of the object become less distinct and shift toward the background colour, usually blue or gray. Atmospheric perspective is an important cue for an observer to determine relative distance of objects in the landscape. The loss of sharpness and lower contrast of photographs relative to in-situ viewing may exaggerate the effects of atmospheric perspective, thus may affect the perception of scale and distance to objects in the landscape, making them appear farther away than they actually are.⁷

5.5 ERRONEOUS CONSIDERATION OF LIFESPAN OF WIND ENERGY FACILITY

Consideration of the likely development lifespan and future of the wind farm indicates a project life of 20-25 years which is flawed. The Report does not consider the reality of turbines and wind energy technology development and turbine tower and blade advances which make application of taller and larger bladed turbines more economical. Typically wind farms are redeveloped during their productive lifespans for example by raising and increasing blade diameter. This means that the expected lifespan of the WEF is longer than 25 years and can even be permanent but with increasing visual impacts as the towers are lifted.

⁵ Sullivan et al (2012).

⁶ Bishop & Miller (2007).

⁷ Palmer & Sullivan 2020.

5.6 LACK OF MITIGATION

The VIA indicates that there is limited mitigation potential due to the extreme size of turbines. However, the alternatives evaluation is neglected and specifically omits to consider turbines of lower hub-height and reduced visibility. A reduced hub height operating at a site of good wind resource may still compete with a turbine of higher hub height at a site with poorer wind resource. The omission to investigate a reduced hub-height along with the failure to consider the no-go alternative mean the EIR has not considered the minimum requirements for “alternatives” as prescribed in the EIA Regulations. We submit that proper assessment and consideration of these alternatives will most likely have demonstrated that the proposed location for the WEF is not suitable for the development but was avoided to prevent this conclusion from being reached.

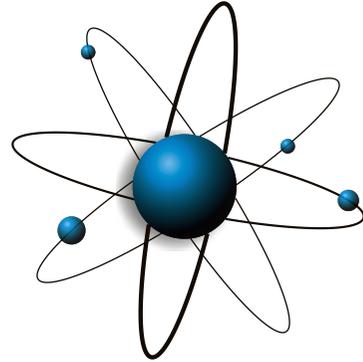
5.7 EXTERNAL REVIEWER

It is problematic that the external specialist review notes that the *“peer reviewer received the VIA report at a very late stage in the process and has had very limited time to produce this peer review report”*. This statement confirms that the specialist review cannot be upheld as verification of the veracity of the study. In fact, the external specialist himself admits so much. *“The review...may require an additional opportunity and sufficient time to make specific recommendations regarding additions or alterations to the report, or whether the proposed development is acceptable in nature or fatally-flawed”*. This statement means the external specialist review report is inadequate, should be rejected and referred back to the specialist to perform a proper independent review that meet independent scientific standards.

5.8 CONSIDERATION OF ALTERNATIVES

The VIA is deficient in considering alternatives and specifically not considering the no-go option, with the inadequacy being carried over into the SIA and EIR where neither the no-go option or the option (and benefits) of protected area expansion.

ANNEXURE A – SENSE OF PLACE



**ESCIENCE
ASSOCIATES**
escience associates (pty) ltd

COMPARITIVE VISUAL IMPACT ASSESSMENT

PROPOSED ALBANY WIND ENERGY FACILITY, EASTERN CAPE, SOUTH AFRICA

ANNEXURE A

Sense of Place

BY JA GELDENHUYS & THEO FISCHER

APRIL 2020

POSTAL ADDRESS: PO Box 2950, Saxonwold, 2132, Johannesburg

PHYSICAL ADDRESS: 09 Victoria Street, Oaklands, 2192, Johannesburg

TEL: +27 11 728 2683

AlbanyWEF - Sense of Place



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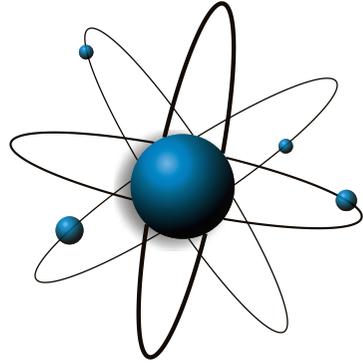
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ANNEXURE B - VIEW SIMULATION: GREAT FISH PROVINCIAL NATURE RESERVE



**ESCIENCE
ASSOCIATES**
escience associates (pty) ltd

COMPARITIVE VISUAL IMPACT ASSESSMENT

PROPOSED ALBANY WIND ENERGY FACILITY, EASTERN CAPE, SOUTH AFRICA

ANNEXURE B

View Simulation: Great Fish Provincial Nature Reserve

BY JA GELDENHUYS & THEO FISCHER

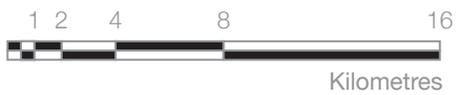
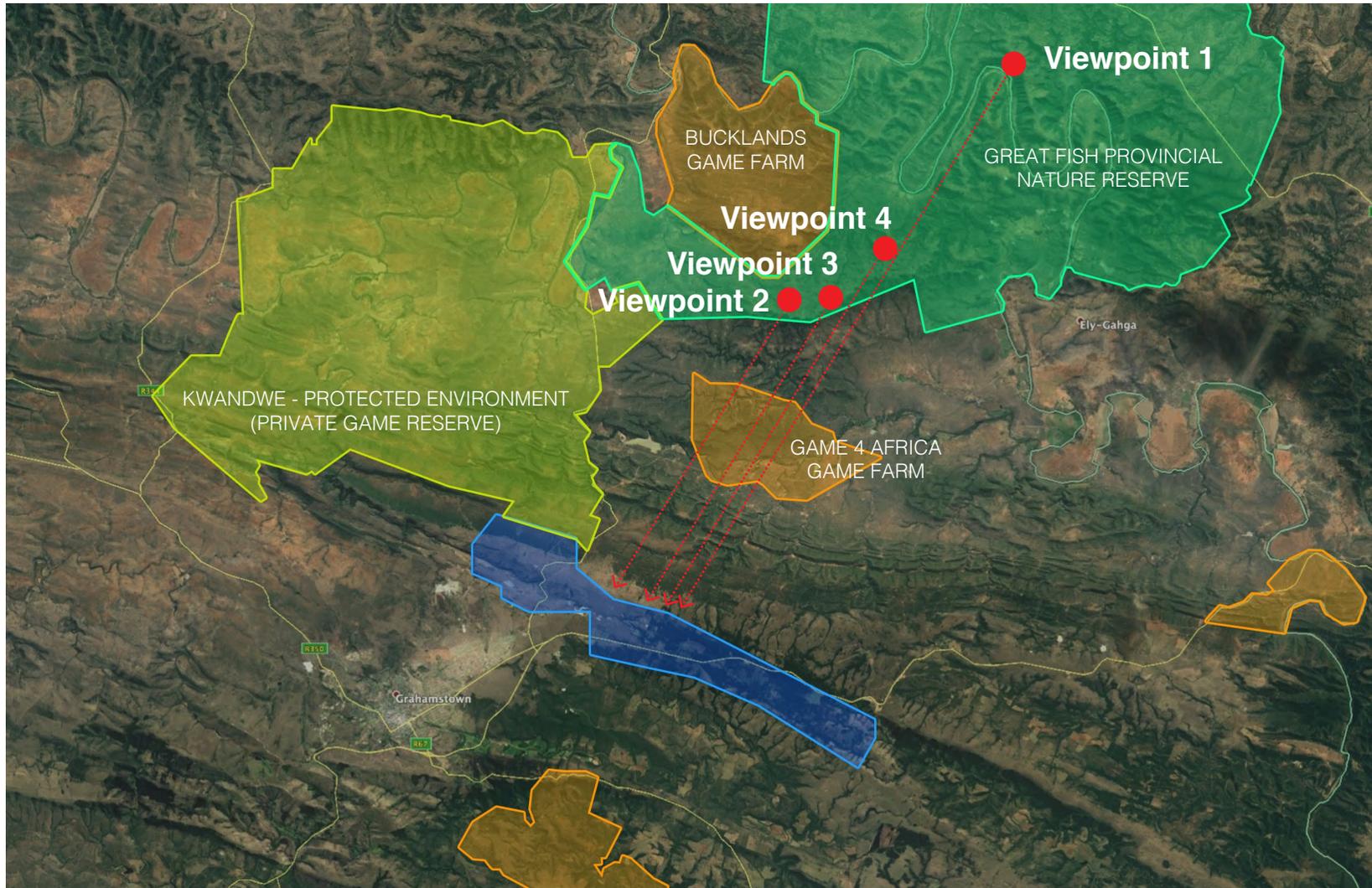
JULY 2020

POSTAL ADDRESS: PO Box 2950, Saxonwold, 2132, Johannesburg

PHYSICAL ADDRESS: 09 Victoria Street, Oaklands, 2192, Johannesburg

TEL: +27 11 728 2683

AlbanyWEF - Great Fish Provincial Nature Reserve Viewpoints



LEGEND

- Proposed Development
- Great Fish Provincial Nature Reserve
- Kwandwe - Protected Environment
- Game Farms

- Viewpoint 1 (Adam's Krans)**
 33°2'3.94"S 26°49'34.95"E
 Distance: 31km
 Heading: 221,9°
- Viewpoint 2 (Research Station)**
 33°08'09.4"S 26°43'13.6"E
 Distance: 15,3km
 Heading: 203,23°
- Viewpoint 3 (Game Trail)**
 33°08'18.7"S 26°44'03.5"E
 Distance: 14,9km
 Heading: 203°
- Viewpoint 4 (Game Trail)**
 33°06'52.8"S 26°45'55.5"E
 Distance: 18,2km
 Heading: 203°



AlbanyWEF - Viewpoint 1 - Adam's Krantz



GREAT FISH PROVINCIAL
NATURE RESERVE

Adam's Krantz Viewpoint

DAY
BEFORE DEVELOPMENT

33°2'3.94"S 26°49'34.95"E
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Heading: 221,9°

AlbanyWEF - Viewpoint 1 - Adam's Krantz



GREAT FISH PROVINCIAL
NATURE RESERVE

Adam's Krantz Viewpoint

DAY
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AlbanyWEF - Viewpoint 1 - Adam's Krantz



GREAT FISH PROVINCIAL
NATURE RESERVE

Adam's Krantz Viewpoint

TWILIGHT
BEFORE DEVELOPMENT

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AlbanyWEF - Viewpoint 1 - Adam's Krantz



GREAT FISH PROVINCIAL
NATURE RESERVE

Adam's Krantz Viewpoint

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