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SAHRA Gunstfontein WEF Site Visit Report: 9-10 June 2016

Ms. Natasha Higgitt
nhiggitt@sahra.org.za
SAHRIS Case ID: 8383

1. Purpose

The purpose of the site visit to the proposed Gunstfontein Wind Energy Facility (WEF) is described below:

1. To verify photo montages depicting the visual impact of the proposed Gunstfontein WEF on the historical Verlatenkloof Pass between Matjiesfontein and Sutherland; and
2. To assess the proposed placement of wind turbines for the development of the Gunstfontein WEF.

2. Reason for the Site Inspection

During the review of SAHRIS Case ID: 8383, it became clear that the historical Verlatenkloof Pass on the R354/356 between Matjiesfontein and Sutherland had not been assessed as part of the Heritage Impact Assessment (REF). The Verlatenkloof pass, located adjacent to the proposed Gunstfontein WEF development area, has been identified as a scenic route (mountain pass). Comments issued on the 18 March 2016 (See Appendix A) requested that a buffer zone of three (3) kilometres must be maintained from the scenic route as per previous comments on several other WEFs in the area (See Case ID: 218 and 473).

The responsible Environmental Assessment Practitioner (EAP) for the proposed Gunstfontein WEF, Savannah Environmental (Pty) Ltd (hereafter known as Savannah), responded to the comments on 6 April 2016 (See Appendix B). Savannah on behalf of the applicant (Gunstfontein Wind Farm) requested a revision of the requested three kilometre buffer from the scenic route for this specific development as the turbines are not visible from within the pass. SAHRA was then contacted by African Clean Energy Developments (ACED), a South African registered company dedicated to the development of renewable energy projects in Sub-Saharan Africa, who is responsible for the proposed Gunstfontein WEF. ACED requested a relaxation of the stipulated three (3) km buffer from the pass as it would severely impact the generating capacity of the proposed WEF. SAHRA requested that a meeting should be held to discuss the matter to provide further clarity on the issues noted by ACED.

A meeting was held at SAHRA Cape Town office with representatives from ACED (see Appendix C) on 12 April 2016. It was understood that the 3km buffer meant that eight turbines would need to be removed from their current proposed position. According to data supplied at the meeting, several of these turbines were identified as being among the most productive in terms of their generating capacity. The loss of these turbines would significantly decrease the generating capacity of the WEF, however ACED agreed that Turbines 1 and 2 would be removed/relocated from the current turbine positions. SAHRA requested that the impact of the turbines on the Verlatenkloof pass be assessed before further comment could be issued. Additionally, SAHRA would conduct an independent site visit to verify the on-site condition of the pass and the Visual Impact zone of the proposed WEF.

A letter from Heritage Contracts and Archaeological Consulting (HCAC) was submitted to SAHRA with an assessment of the significance of the Verlatenkloof Pass and the impact of the proposed Gunstfontein WEF on the pass (Van der Walt, 2016 – See Appendix D). The Verlatenkloof Pass was given a medium-high heritage significance rating and no direct impact from the proposed WEF will occur. The primary impact of the WEF on the pass will be a visual impact related to the sense of place. The Visual Impact Specialist provided photomontages of the expected visual impact on the pass from the turbines within the 3km buffer. The Heritage Specialist noted that the topography hides the turbines from view within the pass and concluded that the turbines within the 3km buffer would have a negligible visual impact on the pass from a heritage perspective. The Heritage Specialist supported the relaxation of the 3km buffer to a 1.6 km buffer.

With the above discussions and information in mind, SAHRA stated that an independent site visit would be conducted to verify the information provided and to assess the visual impact on the pass. The discussion below summarises the site visit and findings.

3. Site visit 9-10 June 2016

A site visit was conducted on the 9-10 June 2016 by Natasha Higgitt (Heritage Case officer) and Ragna Redelstorff (SAHRA Heritage Officer Palaeontology). A total of four points along the Verlatenkloof Pass were visited. These points were the result of the identification of visual impact zones as indicated in the response by Savannah on 6 April (See Appendix B). Photomontages were supplied by the Visual Impact Specialist and were compared to on-site conditions. The track log and points assessed are depicted in Figure 1 below.

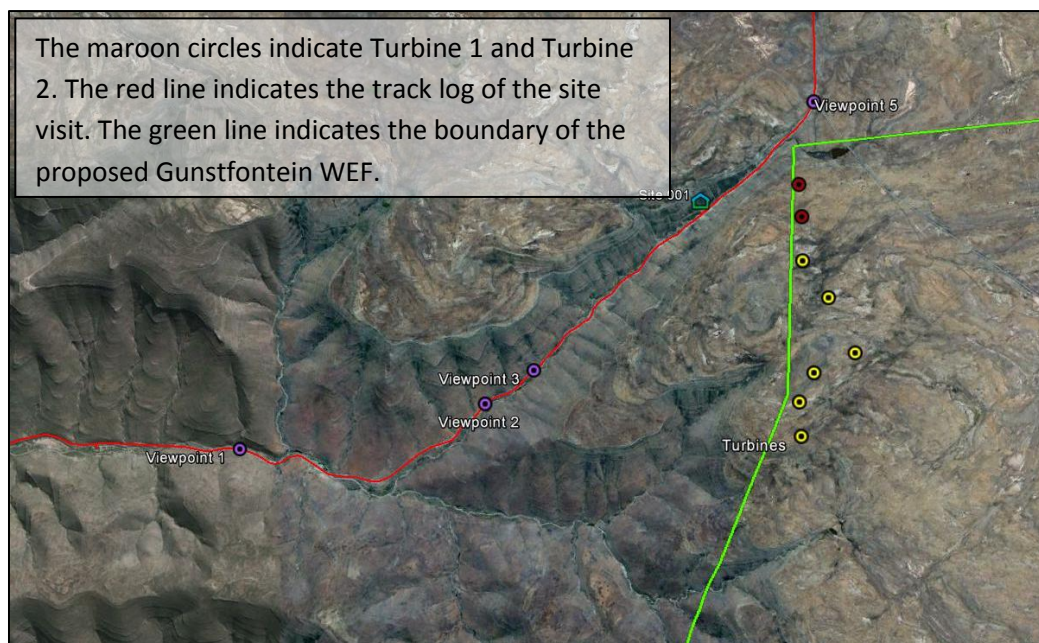


Figure 1: Track log of site visit and points assessed

3.1 View Point 1

View Point 1 is located just after the start of the pass in the direction of Sutherland. According to the photomontage, a total of six wind turbines would be visible at this point when the original layout is considered as shown in Figure 2 below. Photographs of current on-site conditions taken by SAHRA APM staff are included in Figure 3 below for comparison.



Figure 2: View Point 1 Original Layout photomontage provided by the Visual Impact Assessment Specialist



Figure 3: Photograph of on-site conditions taken by SAHRA APM Staff

The wind turbines would be visible from the pass for approximately 2 km which equates to approximately 1 minute 30 seconds driving at 70 km/h (Speed limit of the pass). Very little difference can be seen if one compares the adjusted layout as shown in Figure 4 below to the original layout.



Figure 4: View Point 1 with adjusted layout

3.2 View Point 2

View Point 2 is located within the pass. This point was chosen as a point of concern as the viewshed supplied by the Visual Impact Specialist showed that 1-2 blades may be visible at this point. As shown in Figure 5 below, no wind turbines would be visible from this point, or at the very least, only the tips of the blades may be visible. Photographs taken by SAHRA APM staff as shown in Figure 6 show that on-site conditions are the same as the Google Earth image as supplied by the VIA Specialist.



Figure 5: View Point 2 as supplied by the VIA Specialist



Figure 6: Current conditions of View Point 2

3.3 View Point 3

View Point 3 was chosen as a point of concern for the same reasons as View Point 2. As shown in Figure 7 below, no wind turbines would be visible from this point, or at the very least, only the tips of the blades may be visible. Photographs taken by SAHRA APM staff as shown in Figure 8 show that on-site conditions are the same as the Google Earth image as supplied by the VIA Specialist.



Figure 7: View Point 3 as supplied by VIA Specialist



Figure 8: SAHRA APM Photograph of on-site conditions at View Point 3

3.4 View Point 5

View Point 5 has the smallest distance between the Verlatenkloof Pass and the closest turbine as per the original layout. The closest turbine would have been 420 m from the road as shown in Figure 9 below. On-site conditions are the same as the conditions shown in the photomontages as seen in Figure 10.



Figure 9: View Point 5 Photomontage as supplied by the VIA Specialist



Figure 10: On-site conditions as seen by SAHRA APM Staff

The original layout shows several turbines in close proximity to the pass. The adjusted layout, which takes the SAHRA comments and further discussion into consideration, shows the closest two turbines have been removed (See Figure 11 below).



Figure 11: Adjusted layout at View Point 5

3.5 Site 001 – Stone walled complex

A stone walled complex was identified along the road near the top of the pass as indicated as Site 001 in Figure 1 above. The complex (See Figure 12 below) included two dry packed stone wall kraals located on the opposite slope to the road. The kraals were located on private property and could not be accessed. A third stone walled structure was recorded within the drainage line of the pass. The third structure consisted of two rooms measuring approximately 3m x 3m for the larger room and 3 m x 1.5 m for the smaller room. The larger room had a set of shelves or “muurkas” set into a wall with a long lintel above it. The smaller room had two windows/openings in the walls. No artefacts or midden could be identified in close proximity and it is assumed that any material culture may have been washed down the drainage line. Additionally, a line of approximately 10 willow trees was present on the opposite bank of the non-perennial river. The willow trees appear to have been planted at the same time as all the trees seemed to have been the same height and have similar girth.

Tim Hart of Archaeology Contracts Office (ACO) was consulted regarding the structure as he has conducted many surveys in the surrounding area. According to Mr. Hart, the structure appears to be of

similar age to the pass itself and may have been a toll house to collect money from travelers making use of the pass. According to a 1901 British War map (Figure 13 below) no structures were identified along the pass indicating that the structure may have either not yet been constructed, or it may not have been considered relevant and was therefore not featured on the map.



Figure 12: Top left: Dry packed stone kraal, top right: view of the stone structure from the opposite bank of the river, bottom left: view of the largest room with well built shelves and lintel, bottom right: showing the precise stone working on the corner of the smallest room.

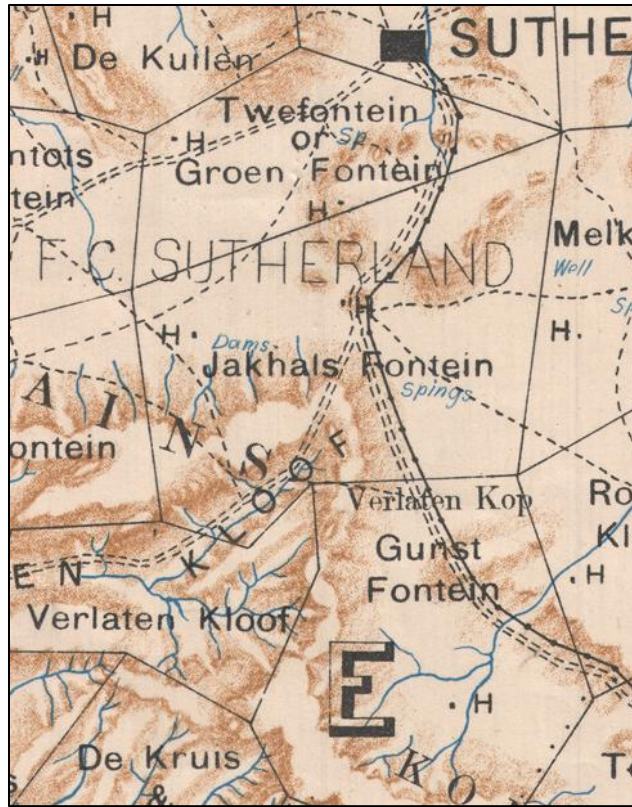


Figure 13: 1901 British Map of the Verlatenkloof Pass

With regards to the visual impact of the proposed Gunstfontein WEF on Site 001, the facility will be hidden behind the ridge opposite the site and should not directly or visually impact the site.

4. Discussion

The original and adjusted layout of the proposed Gunstfontein WEF will not visually impact the majority of the Verlatenkloof Pass. Several turbines will be visible from the bottom of pass for approximately 1 minute 30 seconds. The remaining length of the pass should not be visually impacted by the proposed WEF, and this includes Site 001 identified by SAHRA APM Heritage Officers. SAHRA would stress that heritage resources surrounding large developments such as WEF or Solar Plants should also be considered during the Impact Assessment Phase to ensure that Visual Impact on surrounding heritage, particularly on scenic routes, is assessed and mitigation measures provided.

While the adjusted layout will not change the visual impact within the pass, it makes a considerable change to the visual impact to the remainder of the scenic route R356 after the pass. By removing the closest two turbines, the visual impact of the WEF on the route at the top of the pass decreases as the turbines are now located at least 1.6 km from View Point 5.

The letter from Mr. Van der Walt was sent for a peer review to Mr. Hart from ACO (See Appendix E). Mr. Hart expressed no issues with the factual content of the letter pertaining to the history of the pass;

however, he had a different assessment of the significance of the pass and the overall Visual Impact of the WEF on the surrounding landscape. Mr. Hart indicated that the Verlatenkloof Pass contributes to the experience of travelling to Sutherland, and both Sutherland and the village of Matjiesfontein (Declared Provincial Heritage Site 9/2/058/0001) rely on the sense of deep Karoo open space and wilderness for their tourism industry. He indicated that the pass could be given a high provincial/regional significance based on the aforementioned aesthetic qualities. An additional point was raised where the presence of similar developments (referring to the other proposed WEFs in the area) should not justify the development of adjacent WEFs. It then becomes difficult to defend large areas such as the Karoo against expanding industrial developments. The Karoo is known for its open spaces with large expansive farms. This sense of place must be protected as it is inherently linked to aspects such as but not limited to the tourism business and heritage of the Karoo.

The issue of buffer zones surrounding large scale, high-impact developments and significant heritage resources is one that requires careful consideration and consistency on the part of SAHRA and development as a whole. Whilst the buffer zone for the Gunstfontein development (and another WEF facility in the area) have been relaxed from the original 3km buffer zone to a 1.5km buffer zone, this does not equate to an all over relaxation of buffer zones for future developments. This rather represents a compromise position which may be considered on a case-by-case basis, in the interests of reaching amicable adjustments to development plans that serve to protect South African Heritage and do not significantly hinder infrastructural developments.

5. SAHRA Recommendations

Following the above findings, discussion, previously held meetings and information pertaining to the case, SAHRA APM Unit will recommend the following:

- The closest two wind turbines (Turbine 1 and Turbine 2) to the R356 will be removed from the proposed layout in order to maintain a bufferzone of 1.6 km from the historical Verlatenkloof Pass (as proposed by ACED and agreed upon by SAHRA APM Unit through discussion);
- Should the two turbines be relocated to another area, the access route and location of the turbines must be subjected to a walk-down by a qualified archaeologist and palaeontologist to ensure that no heritage resources are impacted by construction activities. A Walk-Down report must be completed and submitted to SAHRA for comment prior to construction. No construction may occur without comments from SAHRA.

SAHRA will provide an official comment for inclusion into the decision making process by the Department of Environmental Affairs (DEA) in terms of the National Environmental Management Act, 1998 (NEMA).

Appendix A – 18 March 2016 SAHRA Comments

Appendix B – 6 April 2016 Savannah Response to SAHRA Comments

Appendix C – Minutes of 12 April 2016

Appendix D – HCAC letter regarding Verlatenkloof Pass

Appendix E – Email peer review by Mr. T Hart of HCAC letter