ASHA Consulting (Pty) Ltd
6A Scarborough Road
Muizenberg
7945

26 January 2015

Jo-Anne Thomas
Savannah Environmental (Pty) Ltd
By email: joanne@savannahsa.com

Dear Mrs Thomas

GOLDEN VALLEY WIND ENERGY FACILITY - PROPOSED ROAD AND CABLE ALIGNMENT

This letter serves to provide specialist input for the Basic Assessment (BAR) that is being conducted for a newly proposed road and electrical cable alignment on Portion 1 of the farm Bosch Fonteyn 180 near Cookhouse in the Eastern Cape Province. The infrastructure is required for the already authorised Golden Valley Wind Energy Facility (WEF) (DEA ref no.: 12/12/20/1717) but falls outside of the cadastrals originally assessed for the WEF. The WEF project site lies between 4 and 24 km south of Cookhouse with the proposed road and cable alignment being at the southern edge of the WEF area. The alignment is 1.2 km long. The 33 kV electrical cables will either be buried underground or placed overhead on supports.

The full Environmental Impact Assessment (EIA) process for the authorised WEF was conducted by Coastal and Environmental Services (CES) with the specialist heritage work conducted by ACO Associates cc (Hart & Webley 2010). The following is a brief review of the methodology and findings of that report.

A desktop study and field inspection of the WEF site were carried out to understand the local heritage resources and attempt to physically locate as many as possible within the study area. Although only five days were spent on the approximately 180 km^2 site, it is likely that the team gained a good understanding of the types of heritage resources present in the area and their likely distribution. As such, their report, and those for other projects in the vicinity, are considered suitable to conduct a desktop assessment of the proposed road and cable alignment.

Hart and Webley (2010) located Early (ESA), Middle (MSA) and Late Stone Age (LSA) archaeological material. One definable scatter of ESA material was located, while MSA artefacts were found to be broadly scattered across much of the study area but with three denser concentrations being along river valleys. Just two LSA sites were located; one was a scatter of pottery and the other an artefact scatter containing many grindstones. Both were located on eroded alluvial fans in valley bottoms. One collapsed historical cottage was also located. They also examined the many farm buildings in the area and concluded that although the majority of houses were likely to have components greater than 60 years old, all had been modified with the effect their original heritage value was reduced. However, a number of outbuildings and kraals were more intact and had aesthetically pleasing characteristics. Farm graveyards also occur.

Halkett *et al.* (2010) assessed a similar project, the Amakhala-Emoyeni WEF, immediately to the east of the Golden Valley WEF. They recorded a similar range of finds but seemingly in greater densities. Again, it was clear that the vast majority of heritage resources lay within the valleys, although scatters of stone artefacts were occasionally found on hills and slopes, most notably a large scatter of ESA material. Booth (2011), working in the same area on the Nojoli WEF, generally only identified archaeological resources but again, the range was similar to the sites and artefacts found by others. Binneman (2014) conducted a follow-up survey on this project and found a further significant LSA site that was being exposed by heavy erosion in a small valley.

It is clear from the reports cited above that Stone Age archaeological material is common in the broader study area but that the majority is in valley bottoms and is generally revealed by erosion.

Examination of the location of the proposed road and cable alignment (see attached figure) shows that it is located on a hill top and broadly follows the line of a farm track. As such, it seems that the chances of impacting archaeological remains are relatively low. Graves will not be impacted since these are extremely unlikely to be present on hill tops. The nearest built environment features are a farm werf 2.8 km to the south-southwest and another 3.8 km to the south-southeast; these distance are too great for the proposed infrastructure to have any impact on these structures. Because of the already authorised WEF, the addition of this infrastructure is not deemed to create any new impact to the cultural landscape. The cumulative impact will be minimal because, if built overhead, this short power line will be overwhelmingly dominated by the wind turbines and associated electrical infrastructure to its north.

With regards to palaeontology, the site falls within an area coloured red on the SAHRIS Palaeomap, indicating a high fossil sensitivity. Almond (2010) has previously assessed the WEF proposal and conducted fieldwork during his assessment. His conclusion was that, although the study area is underlain by potentially sensitive Middleton Formation rocks of the Beaufort Group, the majority of it is mantled by relatively unfossiliferous alluvium and colluvium which obscures the underlying rocks and provides a buffer protecting them. Furthermore, the nature of these rocks means that they erode readily and seldom preserve unweathered sections. Almond (2010) only found two areas of sensitivity within the proposed WEF site which would require mitigation, both of which are located along the western margin of the study area (see attached figure). This is well away from the location of the proposed road and power line. A study for an adjoining WEF to the north indicated that a pre-disturbance survey was required once the final layout was available (Almond 2009). This follow-up survey (including test excavations) was carried out by Durand (2012) who reported finding no fossil material at all, largely because the surface geology consisted of unconsolidated alluvium. Durand (2012) also considered it unlikely that fossil material would be uncovered during excavations for the proposed WEF. These studies strongly suggest that no further palaeontological work should be required for the proposed road and power line alignment.

It is therefore recommended that no field studies be required for this project but that when a heritage walk down survey of the final layout of the Golden Valley WEF is commissioned this short section of road and power line alignment must be ground truthed as well. As such, an authorisation issued for this BAR should include a heritage walk-down survey as one of its conditions. Furthermore, if any fossil material were to be discovered during excavations then this must be protected *in situ* and reported to SAHRA and/or Eastern Cape Provincial Heritage Resources Authority (ECPHRA) or a palaeontologist for guidance on how to proceed.

It is anticipated that this letter may be submitted to ECPHRA to obtain formal comment for the BAR process and that ECPHRA will support the above recommendations and issue a positive comment allowing the authorisation of the proposed activities subject to a walk-down survey.

Yours sincerely

Jayson Orton

References:

Almond, J.E. (2009). Palaeontological impact assessment: desktop study. Proposed Wind Energy Facility near Cookhouse Western District Municipality, Eastern Cape Province. Unpublished report prepared for Savannah Environmental (Pty) Ltd.

Almond, J.E. (2010). Proposed Terra Wind Energy Golden Valley Project, Blue Crane Route Local Municipality: Palaeontological Impact Assessment. Unpublished report prepared for Coastal and Environment Services. Cape Town: Natura Viva.

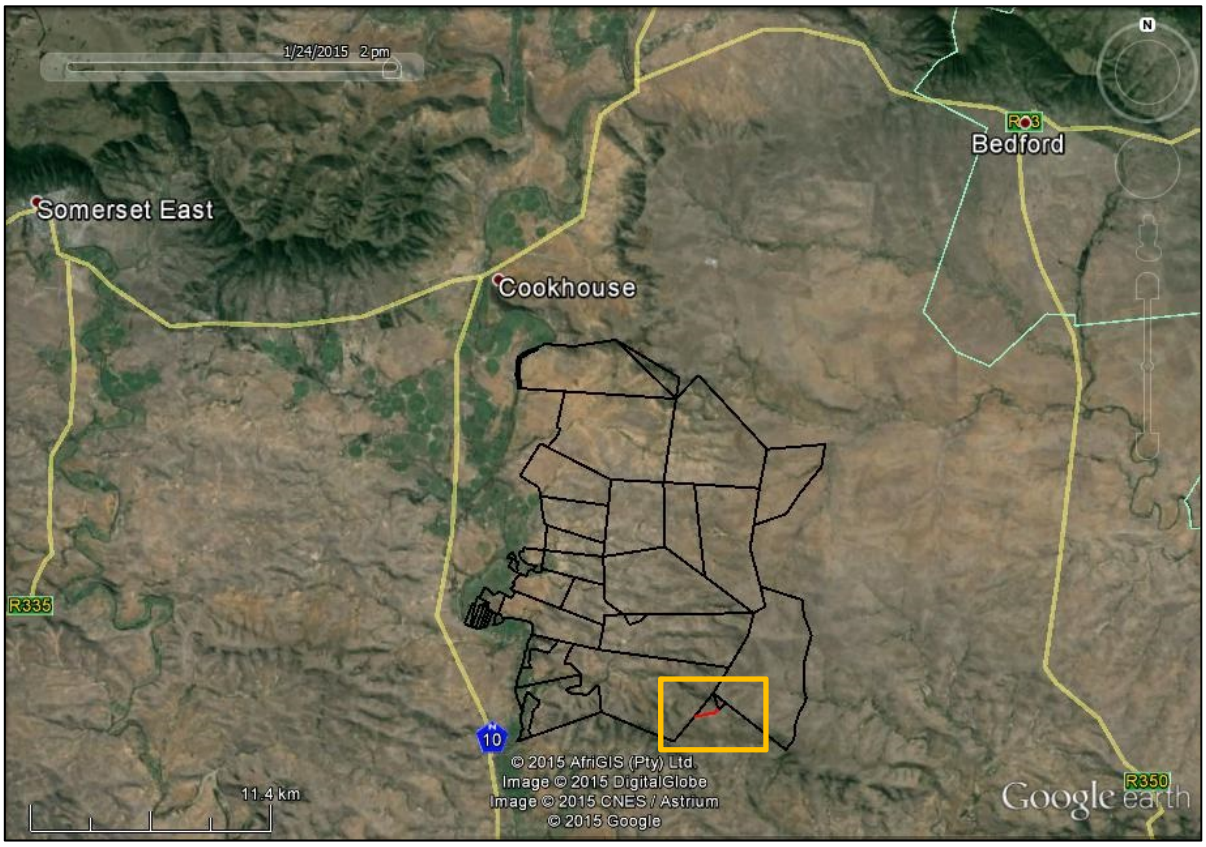
Binneman, J. (2014). An archaeological walkthrough survey of the final layout of the proposed Nojoli Wind Energy Facilty near Cookhouse, Blue Crane Route Local Municipality, Bedford District, Eastern Cape Province. Unpublished report prepared for Savannah Environmental (Pty) Ltd. Eastern Cape Heritage Consultants cc

Booth, C. (2011). A Phase 1 archaeological impact assessment (AIA) for the proposed Cookhouse II Wind Energy Facility, Blue Crane Route Local Municipality, Eastern Cape Province. Unpublished report prepared for Savannah Environmental (Pty) Ltd. Grahamstown: Albany Museum.

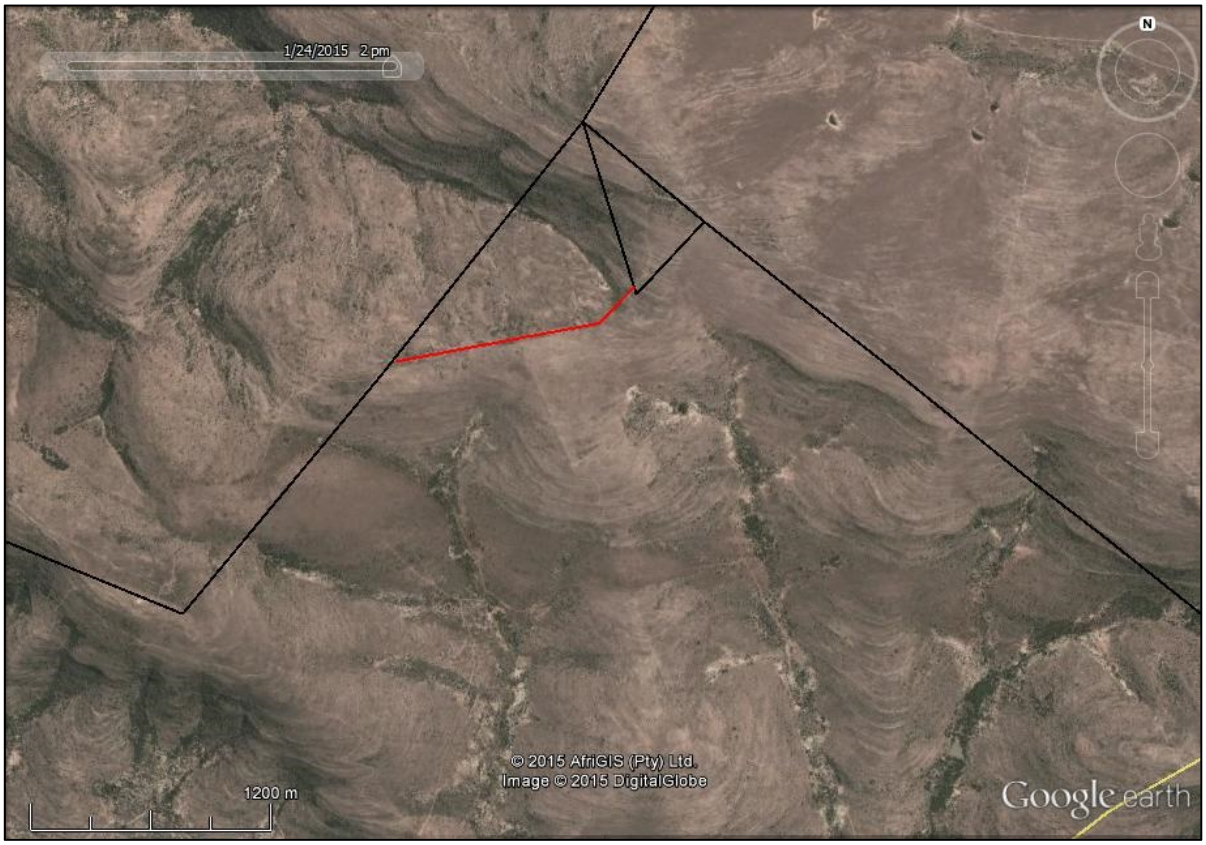
Durand, F. (2012). Report: palaeontological survey of proposed Wind Energy Facility at Cookhouse, Eastern Cape Province. Unpublished report prepared for Savannah Environmental (Pty) Ltd. Dr J.F. Durand.

Halkett, D., Webley, L., Orton, J. & Pinto, H. (2010). Heritage impact assessment of the proposed Amakhala-Emoyeni Wind Energy Facility, Cookhouse District, Eastern Cape. Unpublished report prepared for Savannah Environmental (Pty) Ltd. St James: ACO Associates.

Hart, TJG and Webley, LE. (2010). Proposed Terra Wind Energy Golden Valley Project, Blue Crane Route Local Municipality: Heritage Impact Assessment. Unpublished report prepared for Coastal and Environment Services. St James: ACO Associates.

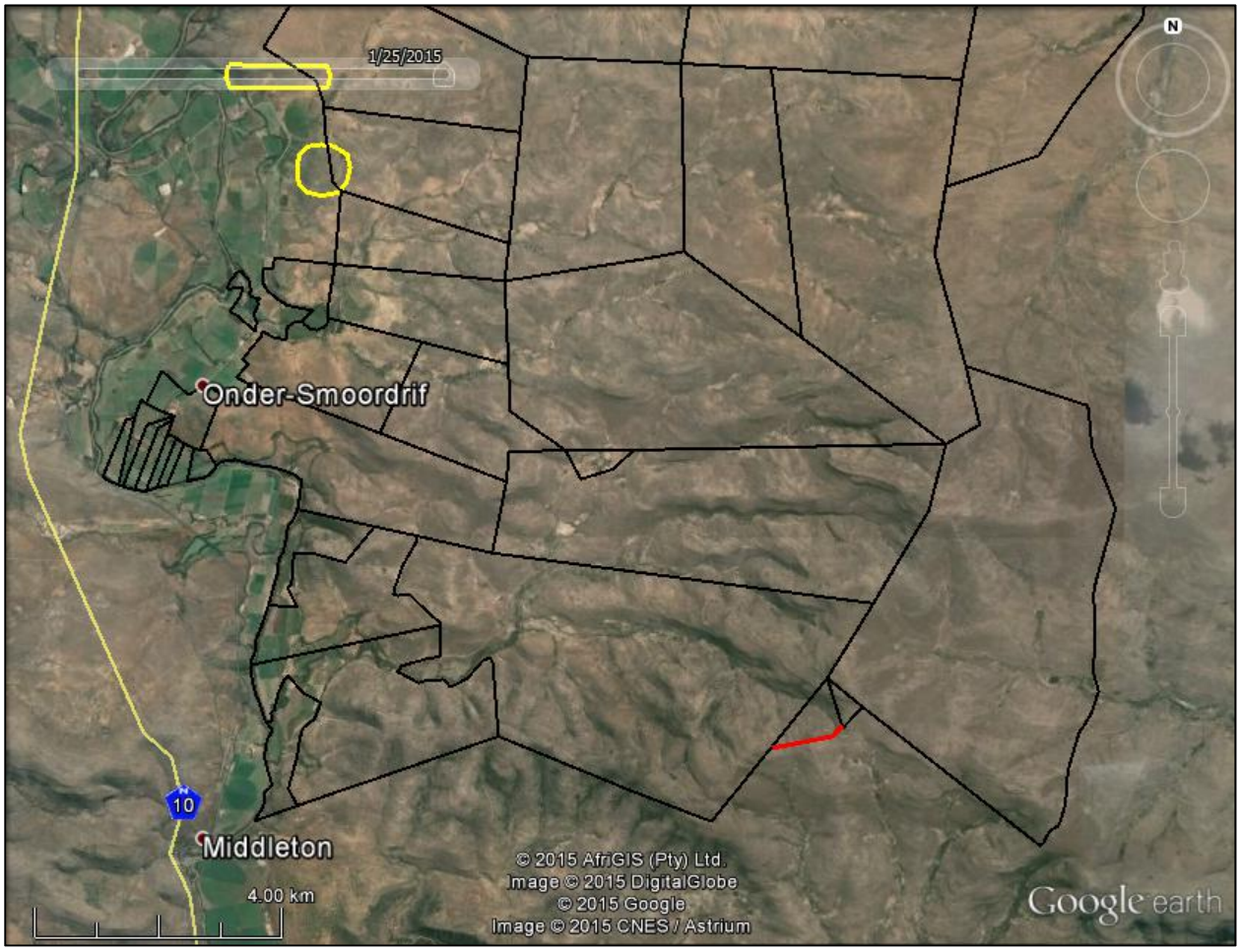


Location of the Golden Valley WEF. The black polygons denote the cadastrals incorporated within the overall project area. The area enclosed by the orange box is enlarged below.



Location of the proposed road and cable alignment (red line) at the southern edge of the WEF area.

ASHA Consulting (Pty) Ltd
Reg. no.: 2013/220482/07 | Directors: Jayson Orton & Carol Orton
6A Scarborough Road, Muizenberg, 7945 | T: 021 788 8425 | C: 083 272 3225
Jayson@asha-consulting.co.za | Carol@asha-consulting.co.za | www.asha-consulting.co.za



Aerial view of the southern part of the WEF site showing the two palaeontologically sensitive locations as mapped by Almond (2010; yellow polygons) relative to the location of the new road and power line nearly 12 km to the southeast.