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16 August 2017

Mr Justin du Piesanie  
Digby Wells Environmental  
Private Bag x10046  
Randburg  
2124

Dear Justin

**RE: Project number: LED4349 and Project description: Ledjadja BAR & AEL**

In my capacity as a professional palaeontologist (PhD Wits, 1990; employed as a palaeobotanist at the University of the Witwatersrand; member of the professional society PSSA) I have read the heritage and palaeontological reports produced by Digby Wells (LED4349\_HBAR and LED4349\_NID) and my assessment is below.

First, the general statement on page 3, Appendix B of LED4349\_HBAR for the definition "Palaeontological - Any fossil remains or traces of animals or plants that were alive in the geological past, and any site that contains such fossils. Fossil fuels such as coal, and fossiliferous rock intended for industrial use are, however, excluded." I am unaware of any document stating that fossil fuels are exempt from SAHRA's protection and legislation. Supporting documentation should be provided or the statement must be corrected.

Second, the geological periods and formations are incorrect – the Ecca-Beaufort boundary is in the upper Permian and the Molteno Formation is in the Upper Triassic.

Third, the assessment was not done by a professional palaeontologist. Nonetheless the conclusions are correct: the "new" borrow pits would be in the same Formations as the earlier proposed pits, namely the Wellington and Swartrant Formations which are equivalent to the Dwyka and Vryheid Formations of the Main Karoo Basin, respectively. As such there is a good chance of finding fossil plants of the *Glossopteris* flora in both formations. Although plants from the Vryheid Formation are well known and not especially interesting, those from the Dwyka and Wellington Formations are rare and very interesting because these would be early examples of the *Glossopteris* flora. It is

critical, therefore, that the chance find protocol is STRICTLY adhered to. Borrow pits are ideal places to find fossils.

Recommendation

The proposed project can proceed but the environmental officer/responsible person MUST monitor the excavations very closely, collect any potential fossiliferous material and send photographs to a palaeobotanist for assessment. If the fossils are of scientific interest then a representative sample must be collected and sent to a recognised repository for curation, and excavations can continue.

The borrow pits and other excavations on the farms Vlugtkraal, Kamiesbult and Bitterfontein are in the Wellington Formation and this stratum could potentially have very important fossils.

If you require further information please do not hesitate to contact me.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'M Bamford', with a horizontal line underneath.

Prof Marion Bamford  
Palaeobotanist  
Director: ESI