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Dr Ragna Redelstorff
South African Heritage Resources Agency
P O Box 4637
Cape Town
8001

Dear Ragna

**RE: CaseID: 12401 (Comment 25 May 2018) Basic Assessment for the Sasol
Mooikraal Conveyor Project, Sasolburg, Free State Province AND
Addendum to the Notification of Intent to Develop, Case ID: 12401 (21 Jan 2019)
Digby Wells Project No: SAS5175**

The proposed project entails the construction of a new conveyor belt of approximately 640 m within the Sigma Colliery: 3 Shaft area and demolishing of three existing structures which form part of the present mining infrastructure. The addendum refers to drilling for exploration within the existing mining right, upgrade roads and storm water management, protection for the Archaeological heritage sites, and rehabilitation of some disturbed areas.

This letter refers to the Palaeontological Heritage of the whole area: Farms Mooikraal 355, Saltberry Plain 137, Kleinvlei and the Shaft 3 site just south of Sasolburg with the proposed conveyor belt route. The farms and conveyor belt route maps are provided in the Addendum Document (Hardwick, 2019; figures p 13-15).

As noted in the BA for this project (Hardwick, 2018), the site is on sediments of the Vryheid Formation that contains coal seams and fossil plant impressions of the *Glossopteris* flora, Jurassic dolerite dykes that are not fossiliferous, and modern alluvial soils. The sites where the three old structures that will be demolished are highly disturbed from past mining and associated activities.

I have assessed the above reports and confirm the findings and recommendation. In addition it should be noted that the coal seams in the Sigma Colliery are more than 150m below the surface and they are covered by mostly dolerite with some sandstone and sandstone intercalated with shale (Snyman, 1998, Fig 18 stratigraphic column 5).

There is no chance, therefore, of surface activities in this vicinity having any impact on the palaeontology. There is less information published for the sedimentology along the proposed route for the conveyor belt and for Shaft 3 site but the sediments are unlikely to be very different. As there is some uncertainty the recommendation for a Fossil Find Protocol is valid. I am adding the protocol to this letter for inclusion into the EMPr, as well as the relevant section of the 1:250 000 Geological map.

Yours sincerely



Prof Marion Bamford PhD
Director: ESI

References cited:

Hardwick, S. 2018. Basic Assessment for the Sasol Mooikraal Conveyor Project Notification of Intent to Develop.

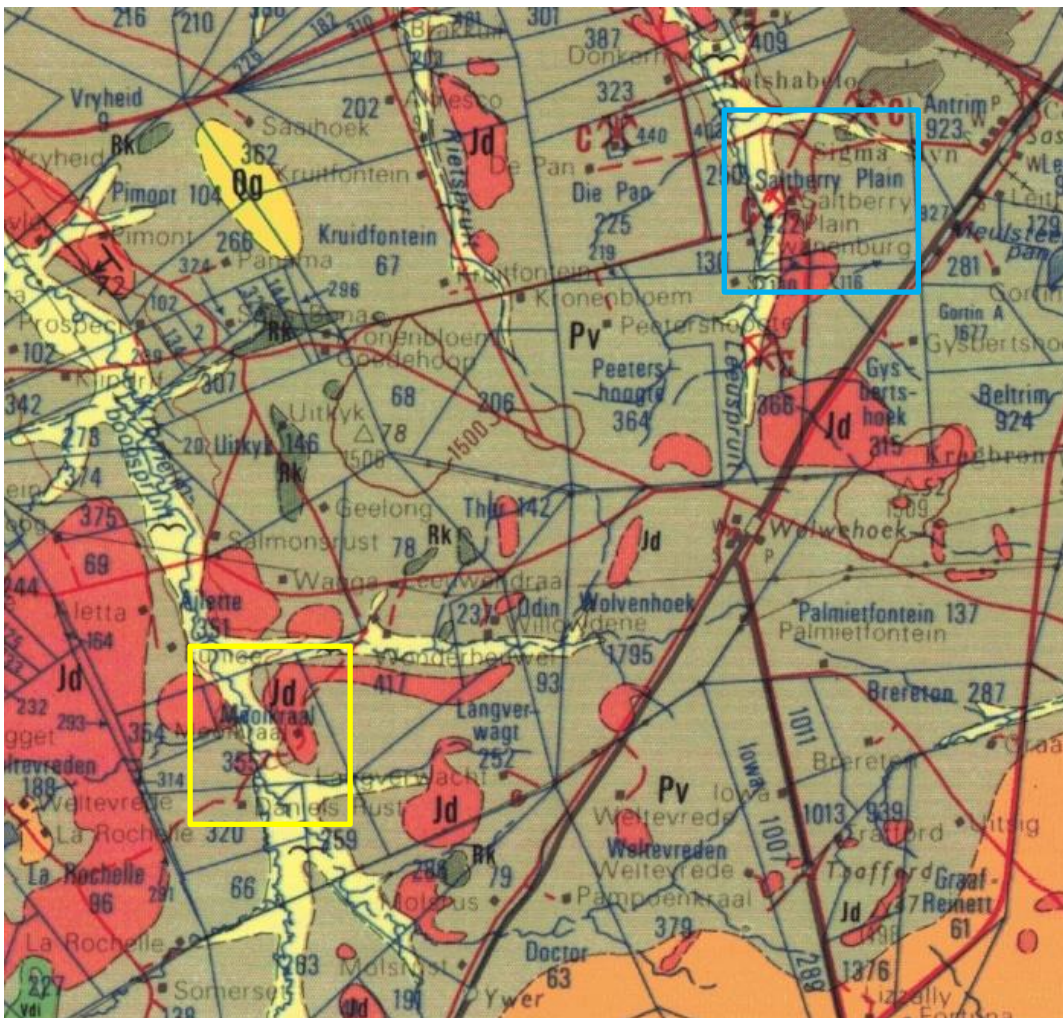
Hardwick, S. 2019. Addendum to the Notification of Intent to Develop, Case ID: 12401

Snyman, C.P., 1998. Coal. In: Wilson, M.G.C., and Anhaeusser, C.P., (Eds) The Mineral Resources of South Africa: Handbook, Council for Geosciences 16, 136-205.

Fossil Find Protocol / Monitoring Programme for Palaeontology – to commence once the excavations commence or the mine is operational.

1. The following procedure is only required if and when excavations, drilling or underground mining commences. The surface activities would not impact on the fossil heritage as the coal and any associated fossil plants are below ground.
2. When mining operations commence the shales and mudstones (of no economic value) that will be cut through in order to reach the coal seam must be given a cursory inspection by the mine geologist or designated person before being added to the waste rock dump used by the mine. Any fossiliferous material should be put aside in a suitably protected place. This way the mining activities will not be interrupted.
3. Photographs of similar fossil plants must be provided to the mine to assist in recognizing the fossil plants in the shales and mudstones (for example see Figure 1.5). This information will be built into the mine's training and awareness plan and procedures.
4. On a regular basis, to be determined by the mine management, the responsible person should examine a representative sample of non-coal material and look for fossil plants and take digital photographs of them to send to a qualified palaeontologist/palaeobotanist sub-contracted for this project to get an opinion on their scientific value.

5. Fossil plants that are considered to be of good quality or scientific interest by the palaeobotanist must be removed, catalogued and housed in a suitable institution where they can be made available for further study. Before the fossils are removed from the mine property a SAHRA permit must be obtained. Annual reports must be submitted to SAHRA as required by the relevant permits.
6. If any underground inspection is deemed necessary then the normal safety procedures that the mine management endorses, must be followed by the palaeontologist and associated mine employees.
7. If no good fossil material is recovered then the site inspections by the palaeontologist can be reduced to annual events until mining operations cease. Annual reports by the palaeontologist must be sent to SAHRA.



Geological Map: South Africa 1:250 000 2626 West Rand 1986. Sites are indicated: yellow outline for Mooikraal 355 and blue outline for Sigma Colliery on Saltberry Plain 137.