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11 February 2021

Dr Ragna Redelstorff  
Heritage Officer Archaeology, Palaeontology & Meteorites Unit  
South African Heritage Resources Agency  
111 Harrington Street  
Cape Town 8001

Dear Dr Redelstorff

**RE: Request for Exemption of any Palaeontological Impact Assessment for the proposed closure of CDR slimes dam, south of Middelburg, Mpumalanga**

In my capacity as a professional palaeontologist, I am requesting exemption for palaeontological impact assessment in terms of the National Heritage Resources Act (Act 25 of 1999) and the National Environmental Management Act (Act 107 of 1998) which requires that the proposed development must be preceded by the relevant impact assessment, in this case for palaeontology.

**Background**

The Samancor Middelburg Ferrochrome (MFC) facility is proposing to decommission a waste disposal facility known as the Chrome Direct Reduction (CDR) facility which was used up to the year 2000. The facility is licensed in terms of water use 21 (g) of the National Water Act (Licence Number 04/B12D/G/1193).

The CDR site is located on the farm Middelburg town and Townlands no 287 JS near Middelburg, Mpumalanga.

The CDR waste is heterogenous in nature (both vertically and horizontally). This leads to variations in the classification of the waste type. Although the majority of the samples were classified as Type 3, some sections of the CDR facility area exceeded the LCT2 threshold for Cr(VI) and should be considered as Type 1 waste. The waste material must be conclusively screened (classified) on a grid base and handled according to the worst-case sample result. DETAILS of the process are given in the report by Knight

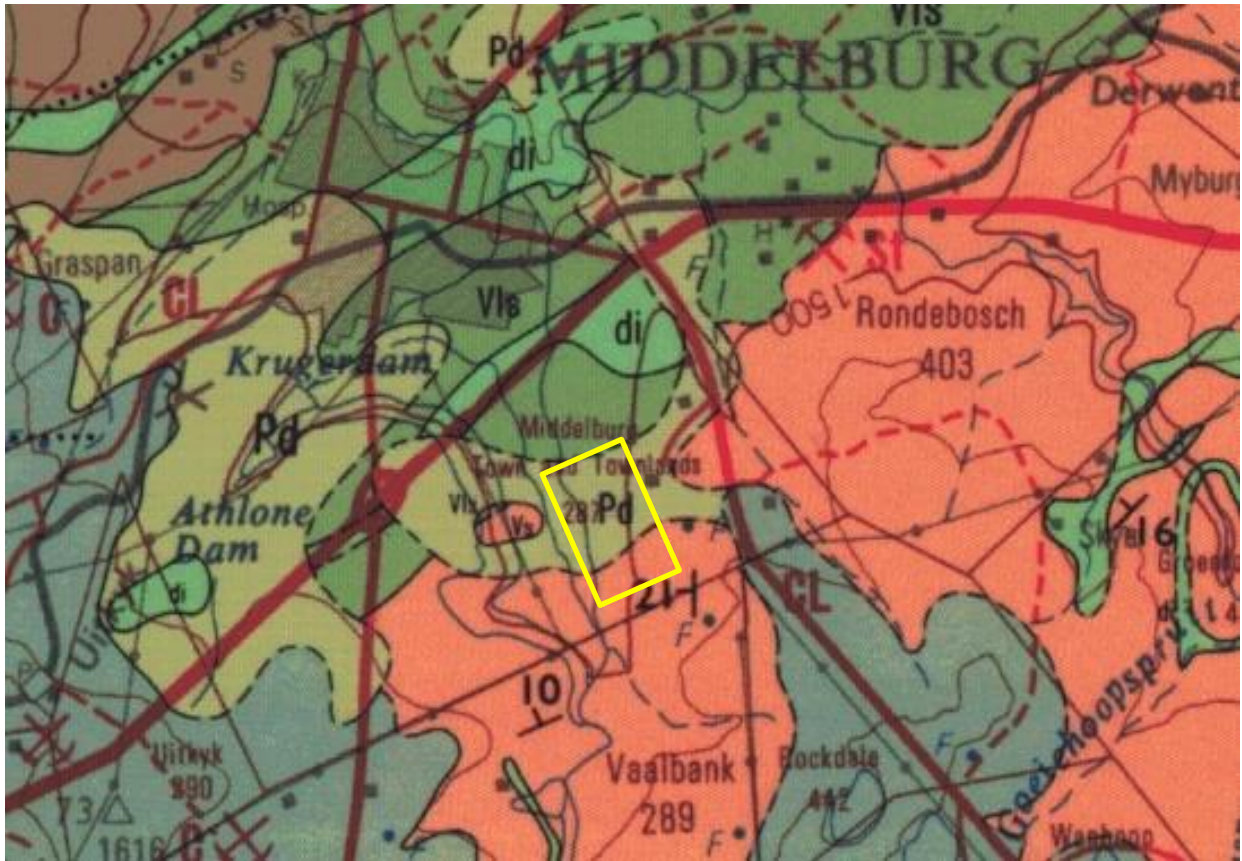


Figure 1: Geological map of the area around the CDR slimes dam. The location of the proposed project is indicated within the yellow rectangle. Abbreviations of the rock types are: Jd (pink) = Jurassic dolerite; Pd = Dwyka Group tillites; di = diabase; Vls = Loskop Group shales and volcanics. Map enlarged from the Geological Survey 1: 250 000 map 2528 Pretoria.

### Geology and Palaeontology

The CDR slimes dam lies partly on moderately sensitive rocks of the Dwyka Group (Karoo Supergroup) in the northern part, and partly on non-fossiliferous dolerite of Jurassic age. However, it should be noted that the material to be screened and redistributed is from the previous mining operation and so is highly disturbed and out of context. The target mineral was chrome from the Rustenburg Layered Suite. They are intruded rocks of volcanic origin so would not have contained any fossils when in situ.

The SAHRIS palaeosensitivity map (Fig 2) applies only to the original rocks in place before any mining activity. The decommissioning of the CDR slimes dam, therefore will not impact on the fossil heritage.



Figure 2: SAHRIS palaeosensitivity map for the site for the proposed CDR slimes dam decommissioning project shown within the yellow rectangle. Background colours indicate the following degrees of sensitivity: red = very highly sensitive; orange/yellow = high; green = moderate; blue = low; grey = insignificant/zero.

It is recommended that the project be exempt from any Palaeontological Impact Assessment.

Yours faithfully

Prof Marion Bamford  
Palaeobotanist; PhD (Wits 1990)