08 April 2021 Project No. 19117180 Letter 003

Ms Melissa Hallquist-Waites
Anglo American Inyosi Coal (Pty) Ltd
Supply Chain
Ground Floor Security
55 Marshall Street
Johannesburg

Dear Melissa

ANGLO AMERICAN INYOSI COAL (PTY) LTD: EXEMPTION LETTER – PROPOSED DISCARD FACILITY AT THE ZIBULO OPENCAST OPERATION

Anglo American Inyosi Coal (Pty) Ltd (AAIC) proposes to develop a discard facility at its opencast operations at Zibulo Colliery, situated near Ogies in the Mpumalanga Province. Currently, coal from the opencast operation (and underground operation further south) is transported to the Phola Coal Processing Plant (PCPP). The PCPP is a 50:50 joint venture between AAIC and South32 SA Coal Holdings (Pty) Ltd (South32). The coarse and fine discard produced by PCPP is currently stored in a surface discard facility at South32's Klipspruit Colliery. The facility is reaching capacity (110 ha) by 2021 and an alternative discard facility is required to service the discard requirement of Zibulo Colliery.

It is proposed that a new discard facility be developed over the mined-out opencast pit at Zibulo Colliery.The discard (generated at PCPP) will be transported to the site via a new discard conveyor.

The proposed discard facility will require a waste management licence (WML) in terms of the National Environmental Management Waste Act, 2008 (Act 59 of 2008) (as amended) (NEMWA), an environmental authorisation (EA) in terms of the National Environmental Management Act, 1998 (Act 107 of 1998) (as amended) (NEMA), and water use licence (WUL) in terms of the National Water Act, 1998 (Act 36 of 1998) (NWA) (as amended). The WML and EA application will need to be supported by a full environmental impact assessment (EIA) process (scoping and impact assessment phases) in terms of the Environmental Impact Assessment Regulations, 2014 (as amended). The competent authority for the application is the Department of Mineral Resources and Energy (DMRE).

As part of the EIA process, a number of specialist studies are being conducted. The National Heritage Resources Act, 1999 (Act 25 of 1999) (NHRA) requires that a heritage and paleontological impact assessment be conducted for proposed developments. Since the proposed discard facility and discard conveyor will be located on disturbed land, an exemption from the requirements of the NHRA to conduct a paleontological impact assessment has been compiled by a palaeontologist.

Golder Associates Africa (Pty) Ltd.
Building 1, Maxwell Office Park, Magwa Crescent West, Waterfall City, Midrand, 1685, South Africa
T: +27 11 254 4800 F: +27 0 86 582 1561
P.O. Box 6001, Halfway House, 1685
Reg. No. 2002/007104/07
Directors: RGM Heath, MQ Mokulubete, SC Naidoo, GYW Ngoma

Please see attached the exemption letter related to the paleontological impact assessment.

Your sincerely,

Golder Associates Africa (Pty) Ltd.

Olivia Allen
GOLDER

Olivia Allen
Environmental Assessment Practitioner

Dr. Brent Baxter
Principal
GOLDER

Brent Baxter
Project Director

OA/BB/nbh

Attachments: **Palaeontological impact assessment exemption letter**

https://golderassociates.sharepoint.com/sites/104294/project files/7 correspondence/letters/19117180_let003_anglozibulodd_epia_final_08apr21.docx

Exemption Letter – Proposed Discard Facility at the Zibulo Opencast Operation

Heidi Fourie – Palaeontological Impact Assessment

eMalahleni Local Municipality, Nkangala District Municipality, Mpumalanga Province.
Farm: Oogiesfontein 4-IS
MP 30/5/1/2/2/338 EM

Protocol for a Chance Fossil Find is included.

The applicant, Anglo American Inyosi Coal (Pty) Ltd (AAIC) proposes to develop a Discard Facility at its opencast operations at Zibulo Colliery, situated near the town of Ogies.

Summary
This letter serves as a Letter of Exemption. It is in compliance with The Minimum Standards for Palaeontological Components of Heritage Impact Assessment Reports, SAHRA APMHOB, Guidelines 2012. The development is underlain by the rocks of the Vryheid Formation, Permian age with a **VERY HIGH** Palaeontological Sensitivity (Groenewald and Groenewald 2014*). As this development will take place on the already mined out, disturbed and partially rehabilitated pit/opencast and mining area and will only be surface infrastructure, therefore, the impact will be **LOW.**

AAIC has appointed Golder Associates Africa (Pty) Ltd (Golder) as an independent environmental assessment Practitioner (EAP) to undertake the regulatory application process for the proposed development of a discard facility. The coarse and fine discard produced from the PCPP is currently deposited onto a surface discard facility on South32's Klipspruit Colliery. The current facility is reaching capacity and by 2021 an alternative discard facility is required to service the discard requirement of Zibulo Colliery. An existing conveyor will be extended. The new discard facility will have a life of approximately 15 years, a total discard disposal capacity of 26 000 m^2 and extend over an area of 150 ha. It will be developed over the mined-out opencast pit at Zibulo Colliery.

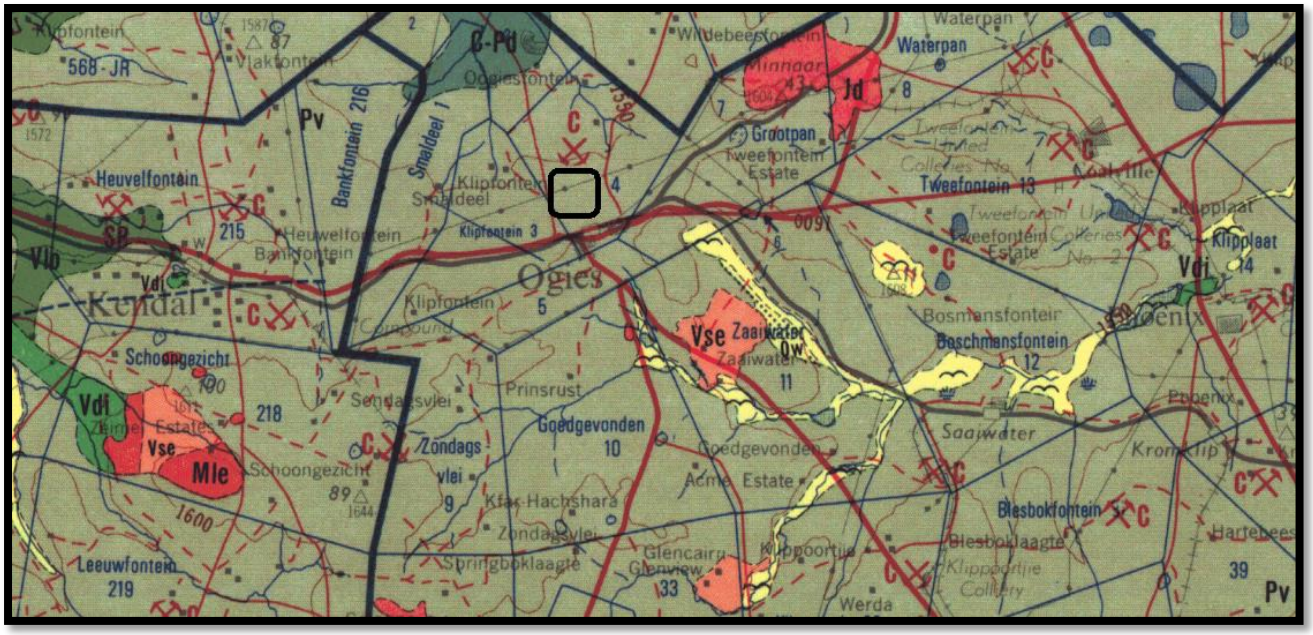


Figure 1: Geology of area (1:250 000 East Rand 2628, Keyser *et al.* 1986)
Legend to Map and short Explanation:

Pv – Shale, sandstone, coal beds (light brown). Vryheid Formation, Ecca Group, Karoo Supergroup. Permian.
----- - - Concealed geological boundary.
----f--- - Fault
⊥ 60° - Strike and dip.
□ – Approximate position of development.

The mine is already operational and situated on the Vryheid Formation. The Vryheid Formation is named after the type area of Vryheid-Volksrust. In the north-eastern part of the basin the Vryheid Formation thins and eventually wedges out towards the south, southwest and west with increasing distance from its source area to the east and northeast (Johnson 2009). The Vryheid Formation consists essentially of sandstone, shale, and subordinate coal beds, and has a maximum total thickness of 500 m. It forms part of the Middle Ecca (Kent 1980). This formation has the largest coal reserves in South Africa. The pro-delta sediments are characterised by trace and plants fossils (Snyman 1996).

The Glossopteris flora is thought to have been the major contributor to the coal beds of the Ecca. These are found in Karoo-age rocks across Africa, South America, Antarctica, Australia and India. This was one of the early clues to the theory of a former unified Gondwana landmass (Norman and Whitfield 2006). Rocks of Permian age in South Africa are particularly rich in fossil plants (Rayner and Coventry 1985). The fossils are present in the grey shale interlayered with the coal seams. The fossils are not very rare and occur also in other parts of the Karoo stratigraphy. It is often difficult to spot the greyish fossils as they are the same colour as the grey shale in which they are present as these coalified compressions have been weathered to leave surface replicas on the enclosing shale matrix. The pollen of the Greenside Colliery near Witbank also on the Vryheid Formation was the focus of a Ph.D study. A locality close to Ermelo, also Vryheid Formation, has yielded *Scutum, Glossopteris* leaves, *Neoggerathiopsis* leaves, the lycopod *Cyclodendron leslii,* and various seeds and scale leaves (Prevec 2011).

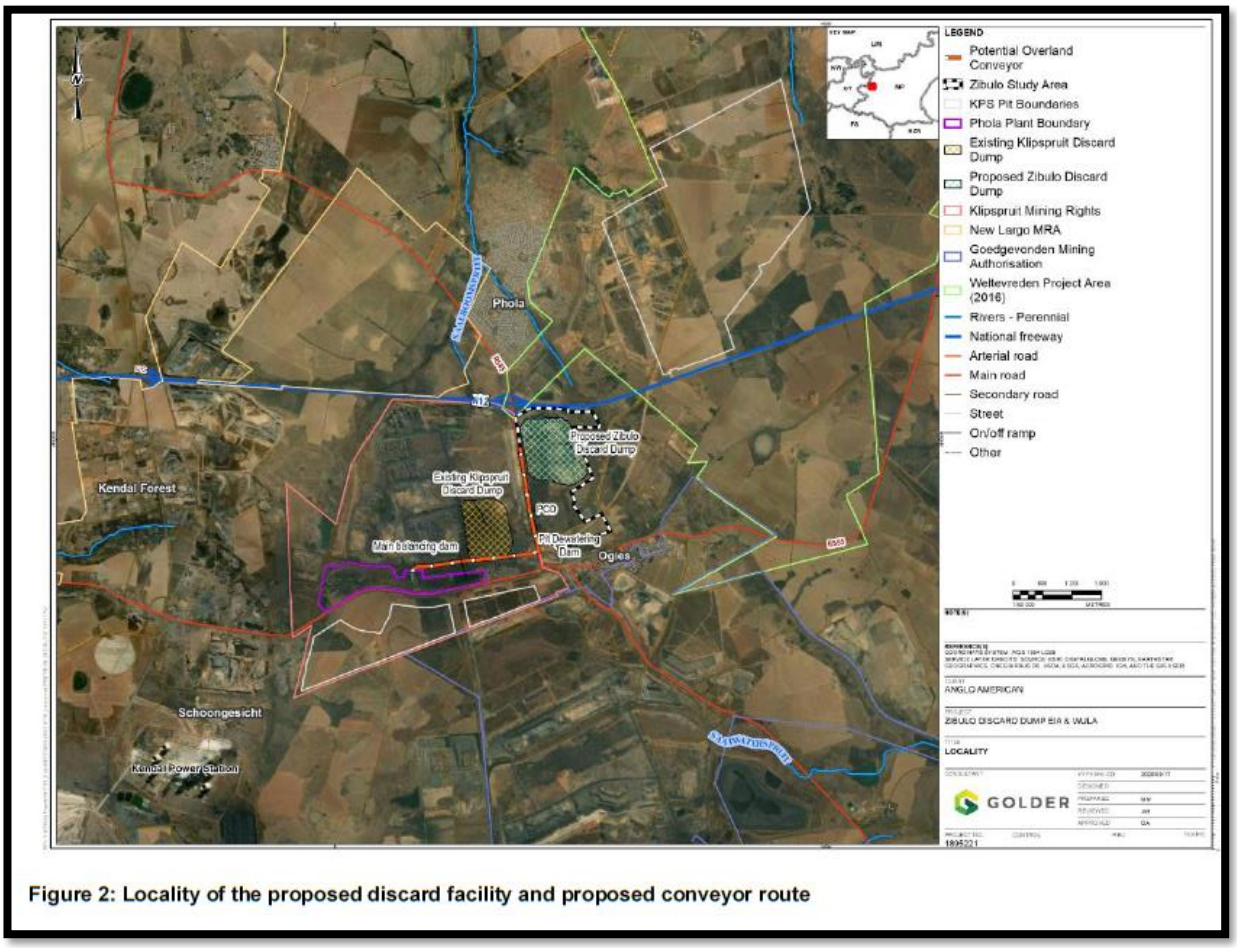


Figure 2: Locality of the proposed discard facility and proposed conveyor route

Figure 2: Location map (Golder).

Figure 3: Enlarged google image to show disturbed surface (Golder).

Palaeontological Sensitivity

Deltaic mudrocks and sandstones, locally coastal and fluvial deposits, with occasional coal seams (Ecca "Coal Measures")	Rich fossil plant assemblages of the Permian Glossopteris Flora (lycopods, rare ferns and horsetails, abundant glossopterids, cordaitaleans, conifers, ginkgoaleans), rare fossil wood, diverse palynomorphs. Abundant, low diversity trace fossils, rare insects, possible conchostracans, non-marine bivalves, fish scales.	Globally important fossil floras from Middle Permian Gondwana. Seriously under-collected in recent years, despite ongoing mining for coal

*Groenewald, G. and Groenewald, D., 2014. SAHRA Palaeotechnical Report: Palaeontological Heritage of the Mpumalanga Province (Pp 23), South African Heritage Resources Agency.

Recommendation

That Exemption from a full Phase 1: Field Study for the proposed Zibulo Discard Facility Development over the mined-out Zibulo Colliery be granted to the applicant taking into consideration all the above stated information.

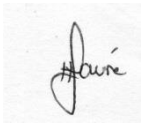
Declaration (disclaimer)

I, Heidi Fourie, declare that I am an independent consultant and have no business, financial, personal or other interest in the proposed development project for which I was appointed to do a palaeontological assessment. There are no circumstances that compromise the objectivity of me performing such work.

I accept no liability, and the client, by receiving this document, indemnifies me against all actions, claims, demands, losses, liabilities, costs, damages and expenses arising from or in connection with services rendered, directly or indirectly by the use of the information contained in this document.

It may be possible that the Exemption Letter may have missed palaeontological resources in the project area as outcrops are not always present or visible on geological maps while others may lie below the overburden of earth and may only be present once development commences.

This report may not be altered in any way and any parts drawn from this report must make reference to this letter.



_____

Heidi Fourie
2021/04/08

Protocol for Chance Finds and Management plan

This section covers the recommended protocol for a Phase 2 Mitigation process as well as for reports where the Palaeontological Sensitivity is **LOW**; this process guides the palaeontologist / palaeobotanist / ECO on site and should not be attempted by the layman / developer.

- As part of the Environmental Authorisation conditions, an Environmental Control Officer (ECO) will be appointed to oversee the construction/prospecting/mining activities in line with the legally binding Environmental Management Programme (EMPr) so that when a fossil is unearthed they can notify the relevant department and specialist to further investigate.
- The ECO should put any fossil finds in a safe place for further investigation by a suitably qualified person.

- The ECO should familiarise him- or herself with the applicable formations and its fossils.
- Most Universities and Museums have good examples of fossils.
- The EMPr already covers the conservation of heritage and palaeontological material that may be exposed during construction/prospecting/mining activities. For a chance fossil find, the protocol is to cease all construction activities, construct a 30 m no-go barrier, and contact SAHRA for further investigation. A formal procedure will be drafted for this.
- It is recommended that the EMPr be updated to include the involvement of a palaeontologist when necessary, either for pre-construction training of ECO or for pre-determined site visits. The ECO must visit the site after clearing, drilling, excavations and blasting and keep a photographic record.
- The developer may be asked to survey the areas affected by the development and indicate on plan where the construction / development / mining will take place. Trenches may have to be dug to ascertain how deep the sediments are above the bedrock (can be a few hundred metres). This will give an indication of the depth of the topsoil, subsoil, and overburden, if need be trenches should be dug deeper to expose the interburden.

The palaeontological impact assessment process presents an opportunity for identification, access and possibly salvage of fossils and add to the few good localities. Mitigation can provide valuable onsite research that can benefit both the community and the palaeontological fraternity. A Phase 2 study is very often the last opportunity we will ever have to record the fossil heritage within the development area. Fossils excavated will be stored at a National Repository.

Bibliography

GRODNER, M. and CAIRNCROSS, B. 2003. A regional scale 3-D model of the Witbank Coalfield, Northern Karoo Basin, South Africa. *South African Journal of Geology,* **106(4):** 249-264.

PLUMSTEAD, E.P. 1963. The influence of plants and environment on the developing animal life of Karoo times. *South African Journal of Science,* **59(5):** 147-152.

PREVEC, R. 2011. A structural re-interpretation and revision of the type material of the glossopterid ovuliferous fructification *Scutum* from South Africa. *Palaeontologia africana,* **46:** 1-19.

RAYNER, R.J. and COVENTRY, M.K. 1985. A *Glossopteris* flora from the Permian of South Africa. *South African Journal of Science,* **81:** 21-32.