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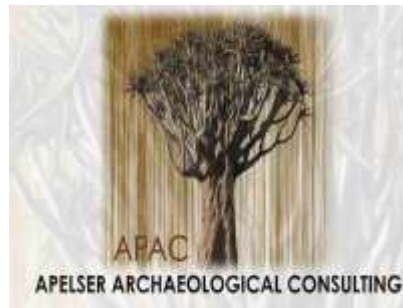
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2020-10-16

To: Me. Nokukhanya Khumalo
South African Heritage Resource Agency
P O Box 4637
Cape Town
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RE: MOTIVATION FOR EXEMPTION FROM FULL PHASE 1 HERITAGE AND PALAEOLOGICAL IMPACT ASSESSMENT – GLENCORE OPERATIONS LIMITED, IMPUNZI DISCARD FACILITY EXPANSION PROJECT

APelser Archaeological Consulting cc (APAC cc) was appointed by Golder Associates Africa (Pty) Ltd (Golder) to provide a motivation for exemption from a full Phase 1 Heritage Impact Assessment (HIA) and Palaeontological Impact Assessment (PIA) for Glencore Operations South Africa's (GOSA) iMpunzi Discard Facility Expansion Project. The proposed expansion of the South Pit and Venture Dump discard facilities are located at their iMpunzi Mining Complex on Portions 1 & 14 of the farms Klipplaats 14 IS, Portions 2, 3, 12, 14, 20, 22, 23, and 28 of Kromfontein 30 IS and Portion 2 of Blesbokfontein 31 IS in the Magisterial District of eMalahleni in Mpumalanga.

1.0 Background to the Project

APAC cc was appointed by Golder for the above project and to provide Motivation for Exemption from a full Phase 1 HIA and PIA. The Scope of Work included the following:

- Desktop review of the SAHRIS database, historic Phase 1 Heritage and Palaeontological assessments conducted within the iMpunzi mining rights area, and the draft environmental impact assessment report for the proposed discard expansion project;
- Drafting and electronic submission of the application for exemption letter to the SAHRA.

In a Final Comments Letter (on Case ID# 14566) dated the 1st of October 2020, SAHRA stated the following:

“GOSA has appointed Golder Associates Africa (Pty) Ltd (Golder) as an independent Environmental Assessment Practitioner (EAP) to undertake the regulatory application process, for

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the proposed the expansion of the South Pit and Venture Dump discard facilities at their iMpunzi Mining Complex. The proposed South Pit Discard Dump will receive coarse discard from the Phoenix Plant. The South Pit is a previously mined-out area and has been partially rehabilitated. The existing Venture Discard Dump footprint will be expanded and the facility will be modified into a co-disposal facility to accommodate both coarse and fine (slurry) discard. A new return water dam (RWD) will be constructed as part of the development of the Venture Co-disposal Facility. The co-disposal facility will receive coarse discard and slurry from the ATC Plant, which sources coal from opencast workings and from discard dump reprocessing. As part of the proposed discard expansion project, an existing haul road from the ATCOM Discard Dumps to the ATC Coal Processing Plant will be widened.

Glencore Operations South Africa (Pty) Ltd appointed Golder Associates Africa (Pty) Ltd to undertake the Environmental Authorisation application for the proposed expansion of the South Pit and Venture Dump discard facilities at their iMpunzi Mining Complex in the Klipplaats 14 IS Portions 1 and 14, Kromfontein 30 IS Portions 2, 3, 12, 14, 20, 22, 23, and 28 and Blesbokfontein 31 IS Portion 2 in the Magisterial District of eMalahleni, Mpumalanga Province. The physical extent of the entire iMpunzi Complex for which there is an existing mining right extends over approximately 6 835 ha. The development will extend over 267Ha of the mining right area. The Venture Discard Dump footprint will be expanded and the facility will be modified into a co-disposal facility to accommodate both coarse and slurry discard. The current pollution control dam (PCD) will be replaced with a larger water storage facility to the north west of the current Venture Discard Dump. The existing haul road will be widened and the proposed South Pit Discard Dump will be located on an area which was historically opencast mined (South Pit).

The SAHRA issued an interim comment dated 17/12/2019 which requested that heritage studies inclusive of the Archaeological and Palaeontological Impact Assessments should be done. On the 11/02/2020, the Final Scoping Report was submitted to SAHRA via email. A response was given to the email on the 17/02/2020 which noted the final Scoping Report and requested that the report be attached to the SAHRIS case. It was also requested of the EAP to submit the EIA document along with its appendices and the heritage specialist reports to the case on SAHRIS for further comments once the FSR has been accepted by the competent authority. The applicant has failed to comply with the interim comment issued on the 17/12/2019 for the application and submitted only the dEIA with no assessment of the impacts to the archaeological and palaeontological heritage resources. However, these statements were not provided by a qualified heritage specialist as per the requirements of section 38 of the NHRA. The draft Environmental Impact Assessment (dEIA) documents were then submitted to the case on the 01/09/2020, which states that an Archaeological and Cultural Heritage Impact Assessment was not undertaken as the footprints of the above mentioned activities will largely be situated on previously mined-out areas. It also states that a Palaeontology Impact Assessment was not undertaken as the footprints of the above mentioned activities will largely be situated on already mined-out areas”.

SAHRA then provided a Final Comment and stated the following:

“The SAHRA Archaeology, Palaeontology and Meteorites (APM) Unit cannot endorse this proposed development as an assessment of the impacts on archaeological and palaeontological heritage resources has not been undertaken as required by 38(3) of the National Heritage Resources Act, Act 25 of 1999 (NHRA) and as part of the EA process as required by section 24(4)b(iii) of the NEMA. SAHRA advises the Department of Mineral Resources and Energy (DMRE) to reject the application for the expansion of the South Pit and Venture Dump discard facilities at their iMpunzi Mining Complex”.

This Motivation for Heritage Exemption is therefore an attempt to address SAHRA's Comments as indicated above.

2.0 Relevant Legalisation

Aspects concerning the conservation of cultural resources are dealt with mainly in two acts. These are the National Heritage Resources Act (Act 25 of 1999) and the National Environmental Management Act (Act 107 of 1998).

The National Heritage Resources Act

According to the above-mentioned act the following is protected as cultural heritage resources:

- a. Archaeological artefacts, structures, and sites older than 100 years;
- b. Ethnographic art objects (e.g. prehistoric rock art) and ethnography;
- c. Objects of decorative and visual arts;
- d. Military objects, structures, and sites older than 75 years;
- e. Historical objects, structures, and sites older than 60 years;
- f. Proclaimed heritage sites;
- g. Grave yards, and graves older than 60 years;
- h. Meteorites and fossils; and
- i. Objects, structures, and sites of scientific or technological value.

The National Estate includes the following:

- a. Places, buildings, structures, and equipment of cultural significance;
- b. Places to which oral traditions are attached or which are associated with living heritage;
- c. Historical settlements and townscapes;
- d. Landscapes and features of cultural significance;
- e. Geological sites of scientific or cultural importance;
- f. Sites of archaeological and palaeontological importance;
- g. Graves and burial grounds;
- h. Sites of significance relating to the history of slavery; and
- i. Movable objects (e.g. archaeological, palaeontological, meteorites, geological specimens, military, ethnographic, books etc.).

A Heritage Impact Assessment (HIA) is the process to be followed to determine whether any heritage resources are located within the area to be developed as well as the possible impact of the proposed development thereon. An Archaeological Impact Assessment (AIA) only looks at archaeological resources. According to Section 38 (1) of the Act an HIA must be done under the following circumstances:

- a. The construction of a linear development (road, wall, power line, canal etc.) exceeding 300m in length.
- b. The construction of a bridge or similar structure exceeding 50m in length.
- c. Any development or other activity that will change the character of a site and exceed 5 000m² or involve three or more existing erven or subdivisions thereof.
- d. Re-zoning of a site exceeding 10 000m².
- e. Any other category provided for in the regulations of SAHRA or a provincial heritage authority.

3.0 Results of Desktop Heritage Review

The proposed expansion of the GOSA South Pit and Venture Dump discard facilities are located at their iMpunzi Mining Complex on Portions 1 & 14 of the farms Klipplaats 14 IS, Portions 2, 3, 12, 14, 20, 22, 23, and 28 of Kromfontein 30 IS and Portion 2 of Blesbokfontein 31 IS in the Magisterial District of eMalahleni in Mpumalanga.

The area would have been used in the past (pre-mining) mainly for agricultural purposes as is visible on aerial images (Google Earth) of the study area. Extensive mining activities over the last 20 years have had

a major impact on the area, with little of the original natural landscape still intact. As a result of previous farming activities and the recent mining operations if any sites, features or material of cultural heritage (archaeological and/or historical) origin or significance did exist within the area, it would be have been extensively disturbed or destroyed.

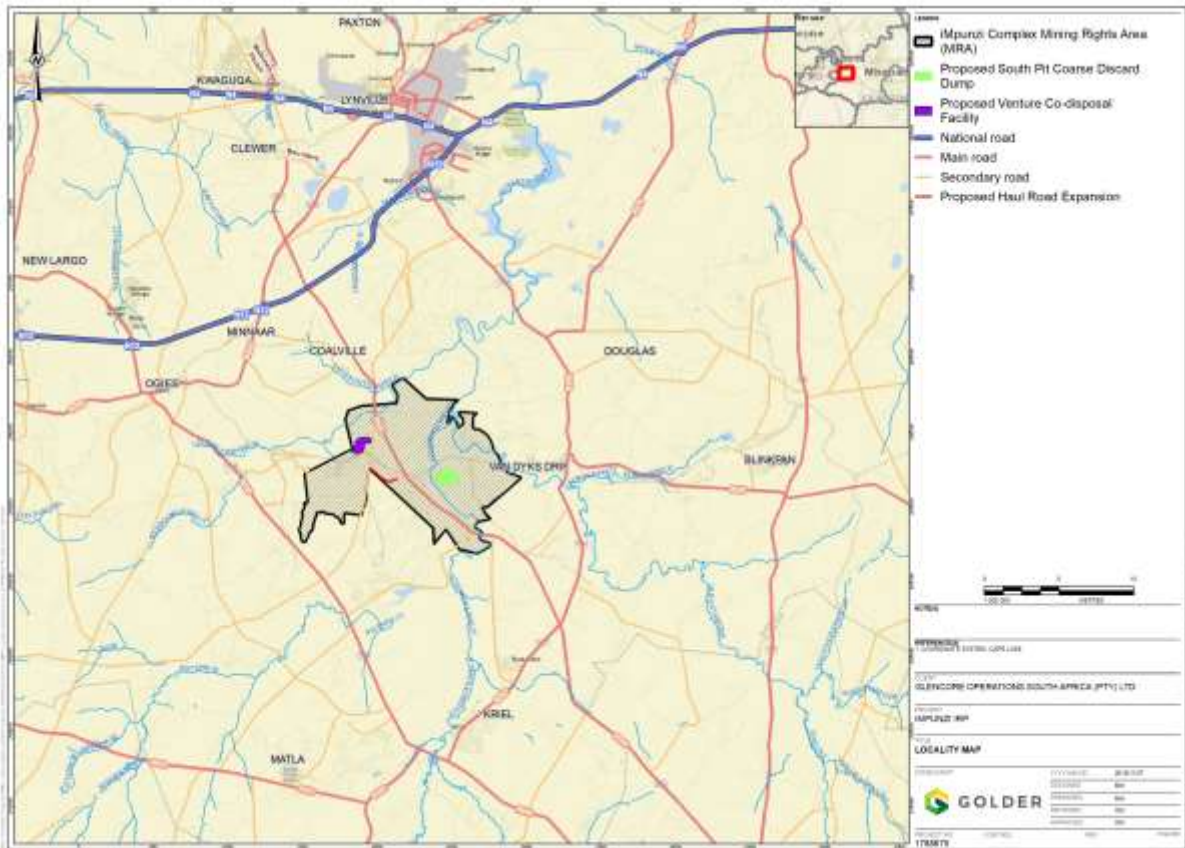


Figure 1: Location Map (courtesy Golder)



Figure 2: General location (Google Earth 2020)



Figure 3: Closer location of the study and mining area where the Impunzi Discard Expansion Project is proposed (Google Earth 2020)

The Stone Age is the period in human history when lithic (stone) material was mainly used to produce tools. In South Africa, the Stone Age can be divided basically into three periods. It is however important to note that dates are relative and only provide a broad framework for interpretation. A basic sequence for the South African Stone Age (Lombard et.al 2012) is as follows:

- Earlier Stone Age (ESA) up to 2 million – more than 200 000 years ago
- Middle Stone Age (MSA) less than 300 000 – 20 000 years ago
- Later Stone Age (LSA) 40 000 years ago – 2000 years ago

It should also be noted that these dates are not a neat fit because of variability and overlapping ages between sites (Lombard et.al 2012: 125).

The closest known Stone Age occurrences are Late Stone Age sites at Carolina and Badplaas, and rock painting sites close to Machadodorp, Badplaas and Carolina. Rock art is also found close to the Olifants River and at the Rietspruit near Witbank (eMalahleni) [Bergh 1999: 4-5]. Some open-air surface sites with scatters of Stone Age artefacts were identified by Matakoma & CRM Africa at the iMpunzi Division of Duiker Mining in 2000 (p.4), but these sites are not located close to the proposed expansion study area.

The Iron Age is the name given to the period of human history when metal was mainly used to produce metal artefacts. In South Africa it can be divided in two separate phases (Bergh 1999: 96-98), namely:

- Early Iron Age (EIA) 200 – 1000 A.D.
- Late Iron Age (LIA) 1000 – 1850 A.D.

Huffman (2007: xiii) however indicates that a Middle Iron Age should be included. His dates, which now seem to be widely accepted in archaeological circles, are:

- Early Iron Age (EIA) 250 – 900 A.D.
- Middle Iron Age (MIA) 900 – 1300 A.D.
- Late Iron Age (LIA) 1300 – 1840 A.D.

The closest known Iron Age sites to the area are those of Melville Koppies and Bruma Lake (Bergh 1999:7) dating to the Late Iron Age (LIA). There are no known Early Iron Age sites in the larger area (Bergh 1999: 6-7). Based on Tom Huffman's research LIA sites, features or material that could present in the larger area will be related to the Ntsuanatsatsi facies of the Urewe Tradition, dating to between AD1450 and AD1650 (Huffman 2007: 167) or the Makgwareng facies of the same dating to between AD1700 & AD1820 (Huffman 2007: 179). According to De Jong no Iron Age sites or features were identified during an assessment of the Goedgevonden Mining area that is situated in close proximity to the iMpunzi study area and if any did exist here in the past recent farming and mining activities would have disturbed or destroyed any traces (De Jong 2007: 20). During the 2000 Phase 1 HIA for Duiker Mining, Matakoma & CRM Africa did identify some remnants of LIA sites in the general area (2000: p.4).

No known Iron Age sites, features or cultural material are known to exist in the proposed iMpunzi study area.

The historical age started with the first recorded oral histories in the area. It includes the moving into the area of people that were able to read and write. The earliest European group to move through the larger geographical area close to the study area was that of Schoon in 1836 (Bergh 1999: 13).

The discovery of diamonds and gold in the Northern provinces had very important consequences for South Africa. After the discovery of these resources, the British, who at the time had colonized the Cape and Natal Provinces, had intentions of expanding their territory into the northern Boer republics. This eventually led to the Anglo-Boer War, which took place between 1899 and 1902 in South Africa, and which was one of the most turbulent times in South Africa's history. During the British march into the Transvaal between February and September 1900, several troops passed by the area where the town of Ogies is situated today. The battalions of Lieutenant Generals J. French, R. Pole-Carew and F. Roberts

all travelled close by the Witbank area and through Middelburg. A railway line ran along this route at the time (Bergh, 1999: 51). At the time of the War, two railway stations were located in the vicinity of the Witbank/Ogies area, and close to each a black concentration camp had been established.

At Middelburg, about 20 kilometers to the east of Witbank, one white and one black concentration camp was also set up. No skirmishes took place in the direct vicinity of the Ogies area (Celliers 2015: 12-13). According to De Jong many of the farms in the area were established in the 1870's and that some of the graveyards located here attest to the practice of employing local African communities as farm labourers. Many sites, structures and features dating to the recent historical period have been identified in the larger geographical area, including homesteads, farm labourer remains and graves (De Jong).

During recent Heritage Assessments for ATCOMS East Expansion of iMpunzi Colliery and for six new Opencasts Pits at iMpunzi, PGS Heritage identified a fairly large number of recent historical sites in the larger study area. These include recent historical farmsteads, farm labourer homesteads and graves and grave sites (PGS: 2012 & 2017). None of these sites are however located in or close to the iMpunzi Discard Expansion Project areas. A number of the grave sites that they had identified at the time have subsequently been relocated.

Palaeontological work was also conducted during a number of these studies. This included both desktop based and Phase 1 PIA work. In a 2014 Phase 1 PIA for the Extension of the Glencore Colliery on Steenkoolspruit 18IS, Groenewald stated the following (2014:p.10):

“The Glencore Colliery is underlain by Permian aged sandstone and interbedded shale as well as very well developed coal beds of the Vryheid Formation, Eccca Group, Karoo Supergroup. Minor trace fossils are present in the deeply weathered coarse-grained sandstone layers. Well-defined plant remains were observed in the less-coalified deposits mainly associated with the contact zones between shale beds and coal seams. These plant remains are small and relatively sparse. They are thus not deemed to have a high palaeontological significance. The potential for finding well-defined plant fossils still remains high and the sections of the study area that still need to be uncovered have thus been allocated a Moderate sensitivity for palaeontology. The mining of coal is, by definition, the mining of fossil plant material”.

He recommended that:

1. The Environmental Control Officer (ECO) of the project be informed of the possibility of finding well-defined plant fossils in the remainder of the proposed mining area, and that the mining of coal is, in essence, the mining of fossil plant material.
2. An application for a collection and destruction permit be made to SAHRA to allow for the collection and destruction of plant fossils during mining operations.
3. A long term strategy for the chance find of well-defined fossils during further mining operations be compiled and the developer must employ a qualified palaeontologist to record these fossils and collect representative samples of these fossils for further study at an appropriate institute as recommended by SAHRA.

In the 2017 HIA for the Opencast Pits at iMpunzi Elize Butler found the following (2017:p.vi):

“The proposed expansion of the iMpunzi mine development is entirely underlain by sedimentary rocks of the Permian aged Vryheid Formation, Eccca Group, Karoo Supergroup. This Formation is known to contain a rich assemblage of plant fossils and thus coal can be mined. According to the PaleoMap on SAHRIS the Vryheid formation has a very high palaeontological sensitivity. Regardless of the sparse and sporadic occurrence of fossils in this biozone a single fossil can have a huge scientific importance as many fossil taxa are known from a single fossil. Due to the fact that the Vryheid Formation sediments and coal beds will only be exposed during the opencast mining operations and associated infrastructure development, it is unlikely that fossils will be observed before the mining takes place. For this reason, a moderate palaeontological sensitivity is allocated to the development footprint”.

She recommended the following:

1. Should fossil remains be discovered during any phase of construction, either on the surface or exposed by fresh excavations, the ECO responsible for these developments should be alerted immediately. Such discoveries ought to be protected (preferably in situ) and the ECO should alert SAHRA (South African Heritage Research Agency) so that appropriate mitigation (e.g. recording, sampling or collection) can be taken by a professional palaeontologist.
2. The specialist involved would require a collection permit from SAHRA. Fossil material must be curated in an approved collection (e.g. museum or university collection) and all fieldwork and reports should meet SAHRA's minimum standards for palaeontological impact studies. The palaeontological desktop study included a Protocol of Finds that must be adhered to.

The proposed iMpunzi Discard Expansion Project study area for which APAC cc was appointed to provide a Motivation for Exemption from Full Phase 1 HIA and PIA for has been extensively impacted by past and on-going mining operations. Prior to that, agricultural activities were also occurring on a large scale. This is clear from older aerial images of the areas showing the impact of these activities as well as the various maps and images provided by Golder. The possibility of any sites, features or material of any cultural heritage (archaeological and/or historical) origin or significance being present here is highly unlikely.



Figure 4: The location of the proposed South Pit Coarse Discard Dump (courtesy Golder)

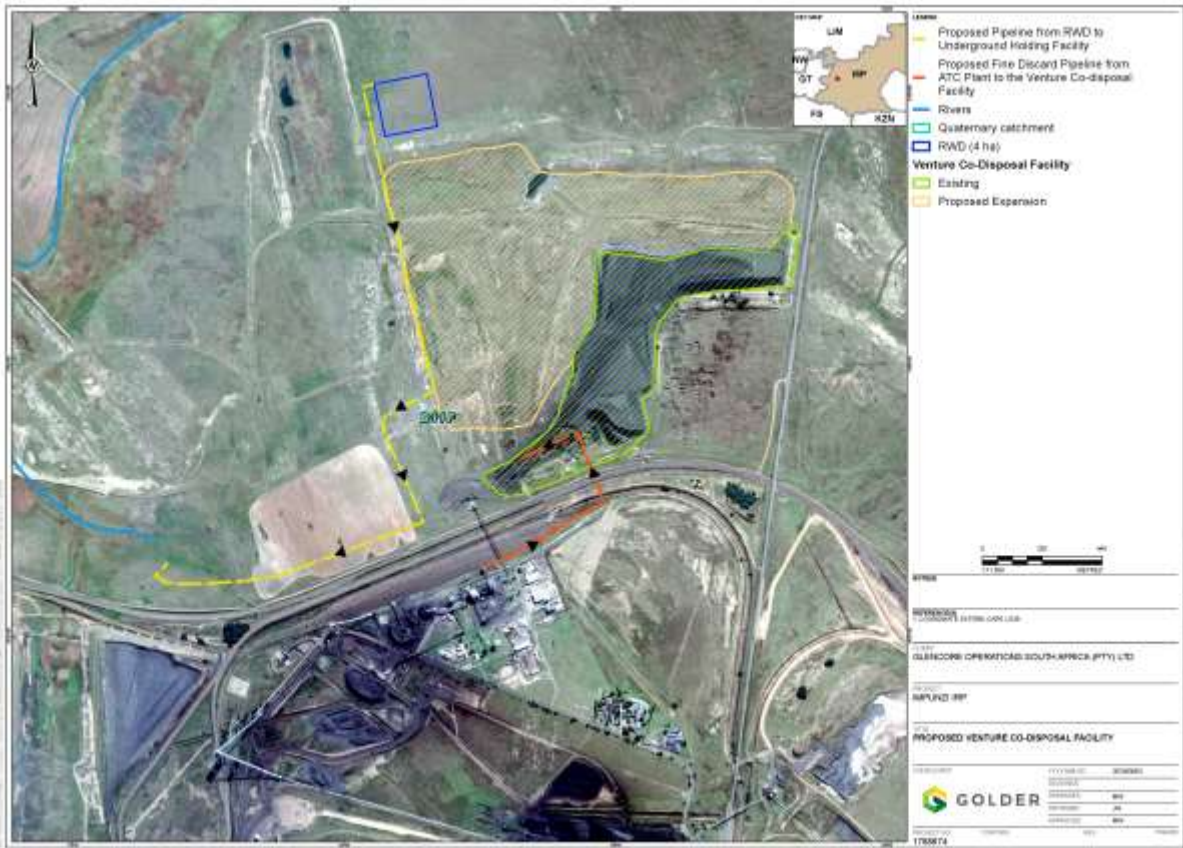


Figure 5: Location of the Venture Co-Disposal Facility (courtesy Golder)



Figure 6: A 1984 aerial image of the study area. At this stage large-scale agricultural activities were the norm still (Google Earth 2020)



Figure 7: By 2003 mining operations were full-blown and had changed the natural and farming landscape to a large degree (Google Earth 2020)



Figure 8: The study and development area in 2009 (Google Earth 2020)



Figure 9: The same area in 2014 (Google Earth 2020)

4.0 Recommendation

Based on the aerial images and heritage desktop study it is therefore deemed unlikely that any significant sites, features or material of cultural heritage (archaeological and/or historical) origin might exist in the study and proposed development area. Recent historical activities (agricultural and later and current mining operations) would have impacted on any if they did exist here in the past and would have disturbed or destroyed these to a large degree. However, known archaeological and historical sites, features and material have been identified in the larger geographical area and this needs to be taken into consideration during any future actions related to the proposed development.

It is therefore recommended that Exemption from a Full Phase 1 Heritage Impact Assessment (HIA) for the proposed iMpunzi Discard Expansion Project be granted to the applicants taking into consideration the following:

The subterranean nature of cultural heritage (archaeological and/or historical) resources must always be kept in mind. Should any previously unknown or invisible sites, features or material be uncovered during any development actions then an expert should be contacted to investigate and provide recommendations on the way forward. This could include previously unknown and unmarked graves, as well as fossil material.

In terms of the Palaeontological Assessment it is also recommended that for the current proposed development actions that a Phase 1 PIA is not required but that the recommendations made in earlier assessments by the various Palaeontology Specialists be adhered to.

Should there be any questions or comments on the contents of this document please contact the author.

Kind regards



Anton Pelsler

References

1. General & Closer Views of Study Area location and footprint: Google Earth 2020.
2. Locality Maps: Courtesy Golder.
3. Bergh, J.S. (red.). 1999. **Geskiedenisatlas van Suid-Afrika. Die vier noordelike provinsies**. Pretoria: J.L. van Schaik.
4. Celliers, J.P. 2015. **Phase 1 Archaeological Impact and Heritage Assessment on portions of the farms Kleinzuikerboschplaat 5 IS, Klipfontein 3 IS and Zondagsvlei 9 IS, in respect of the proposed construction of a 88 kV Eskom Powerline, Ogies, Mpumalanga Province**. Unpublished Report Kudzala Antiquity cc. For: Royal Haskoning DHV. May 2015.
5. De Jong, R.C. 2007. **ARCHAEOLOGICAL AND HERITAGE IMPACT ASSESSMENT REPORT: PROPOSED NEW GOEDGEVONDEN COLLIERY EXPANSION PROJECT ON THE FARMS GOEDGEVONDEN 10 IS, ZAAIWATER 11 IS AND KLEINZUIKERBOSCHPLAAT 5 IS NEAR OGIES, EMALAHLENI LOCAL MUNICIPALITY, MPUMALANGA**. Unpublished Report Cultmatrix cc. For: Jacana Environmentals cc. June 2007.
6. Steyn, H., P.Birkholtz, A.Salomon & W.Fourie. **Phase 1 Archaeological Survey of the IMPunzi Division of Duiker Mining – Witbank/Ogies Area**. Unpublished Report: Matakoma & CRM Africa. For: Duiker Mining. August 2000.
7. Fourie, W. 2012. **ATCOM EAST COLLIERY EXTENSION ATCOM East Expansion of the IMPunzi Colliery, on Portions of the Farms Steenkoolspruit 18 IS, Van Dyksdrift 19 IS and Kromfontein 30 IS, Emalahleni, Mpumalanga Province. Heritage Impact Report**. Unpublished Report: PGS Heritage & Grave Relocation Consultants. For: Jones and Wagener Consulting Civil Engineers. July 2012.
8. Groenewald, G. 2014. **PHASE 1 PALAEOLOGICAL IMPACT ASSESSMENT FOR THE EXTENTION OF THE GENCORE COLLIERY NEAR THE TOWN OF WITBANK IN MPUMALANGA PROVINCE**. Unpublished Report. For: PGS Heritage. December 2014.
9. Birkholtz, P. HERITAGE IMPACT ASSESSMENT THE PROPOSED DEVELOPMENT OF SIX OPENCAST MINING PITS AT THE IMPUNZI MINING COMPLEX LOCATED SOUTH-EAST OF OGIES, EMALAHLENI LOCAL MUNICIPALITY, NKANGALA DISTRICT MUNICIPALITY, MPUMALANGA PROVINCE. Unpublished Report PGS Heritage (Pty) Ltd. For: Glencore Operations South Africa (Pty) Ltd. June 2017.
10. Huffman, T.N. 2007. **Handbook to the Iron Age: The Archaeology of Pre-Colonial Farming Societies in Southern Africa**. Scottsville: University of KwaZulu-Natal Press.
11. Republic of South Africa. 1999. National Heritage Resources Act (No 25 of 1999). Pretoria: the Government Printer.
12. Republic of South Africa. 1998. National Environmental Management Act (no 107 of 1998). Pretoria: The Government Printer.