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2021/598485/07

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28 October 2021

Attention: **Ms Nokukhanya Khumalo**

SAHRA Case Officer Limpopo

South African Heritage Resources Agency (SAHRA)

Dear Ms Khumalo

**Application for exemption from a Heritage Impact Assessment for the proposed reworking of backfilled Opencast Pits at Dwarsrivier Chrome Mine**

**1. Introduction**

Envirologistics (Pty) Ltd was appointed by Dwarsrivier Chrome Mine (Pty) Ltd (DCM) as Environmental Assessment Practitioner to manage the Environmental Impact Assessment process for the proposed reworking of backfilled opencast pits. As part of the process Beyond Heritage was appointed to provide an assessment of the possible impacts on heritage resources.

The mine is situated approximately 60km northwest of Lydenburg, 25km south of Steelpoort and 63km northeast of Roossenekal in the Limpopo Province. The mine currently holds the surface rights for the Remainder of Portion 1 (Portion 1) and Portion 0 (Remaining Extent) of the farm Dwarsrivier 372KT, as well as Portion 4 (a portion of Portion 3) of the farm De Grootboom 373KT. The operation is located in the Fetakgomo Tubatse Local Municipality, within the boundaries of the Sekhukhune District Municipality. (Figure 1.1 to 1.3).

The following information was obtained from the EIA report (Bekker 2021): The mine is originally approved in terms of the Minerals Act, 1991 under Mine Licence No. 21/99, which was supported by an Environmental Management Programme (EMPr), approved on 14 December 1999. An amendment to the EMPr (now the EMPr, 2010) was commissioned by the mine in order to improve overall environmental management on the mine site in line with recognised Environmental Management Best Practice, stemming from improved understanding of on-site environmental system functioning and potential mining impacts, through a review of significant additional specialist assessments for the mine site. This Amended EMPr (EMPr, 2010) specifically made provision for the reworking of the Old Tailings Storage Facility (TSF) in Section 4.5.2. This section in the EMPr further made provision for the backfilling of the North and South Opencast Pits, stating:

1. "Tailings – fine reject from the plant in slurry form, at the end of the plant process, is deposited in various authorised facilities, such as the North Pit..."

and

2. "The South Pit has since reached its capacity to accommodate backfilling with the aforementioned tailings.

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Tailings is presently diverted to backfill the so-called 'North Pit', until such time as the Mine's proposed new tailings facility has gone through all appropriate authorisation, licensing and approval processes." Subsequent to the EMPr, 2010, an approval for the Northern TSF was secured by the mine in the Environmental Authorisation Reference: 12/1/9-7/1e/GS4, 9 July 2011 and no further backfilling of the North and South Opencast Pits was undertaken. Rehabilitation by means of shaping and vegetation were commissioned on the North Opencast Pit since 2019. The backfilling of the opencast pits was further approved in the Water Use Licence (WUL) Reference 16/2/7/B400/C83, dated 21 January 2008. DCM plans to sell its historic chrome tailings from the Old TSF (an approved reworking activity in the EMPr, 2010) as well as from the backfilled tailings from the two (2) backfilled pits (North and South Opencast Pits). Dry tailings will be recovered from the historic tailings backfill pits situated at the North and South Shafts. The mine anticipates that material will be sold as from the last quarter of 2021 pending the approval of the Waste Management Licence (WML).

The project will not result in any additional clearance or construction of additional infrastructure, and only involves the reworking of backfill pits via mechanical removal and processing through the existing (approved) Beneficiation Plant (Bekker 2021).

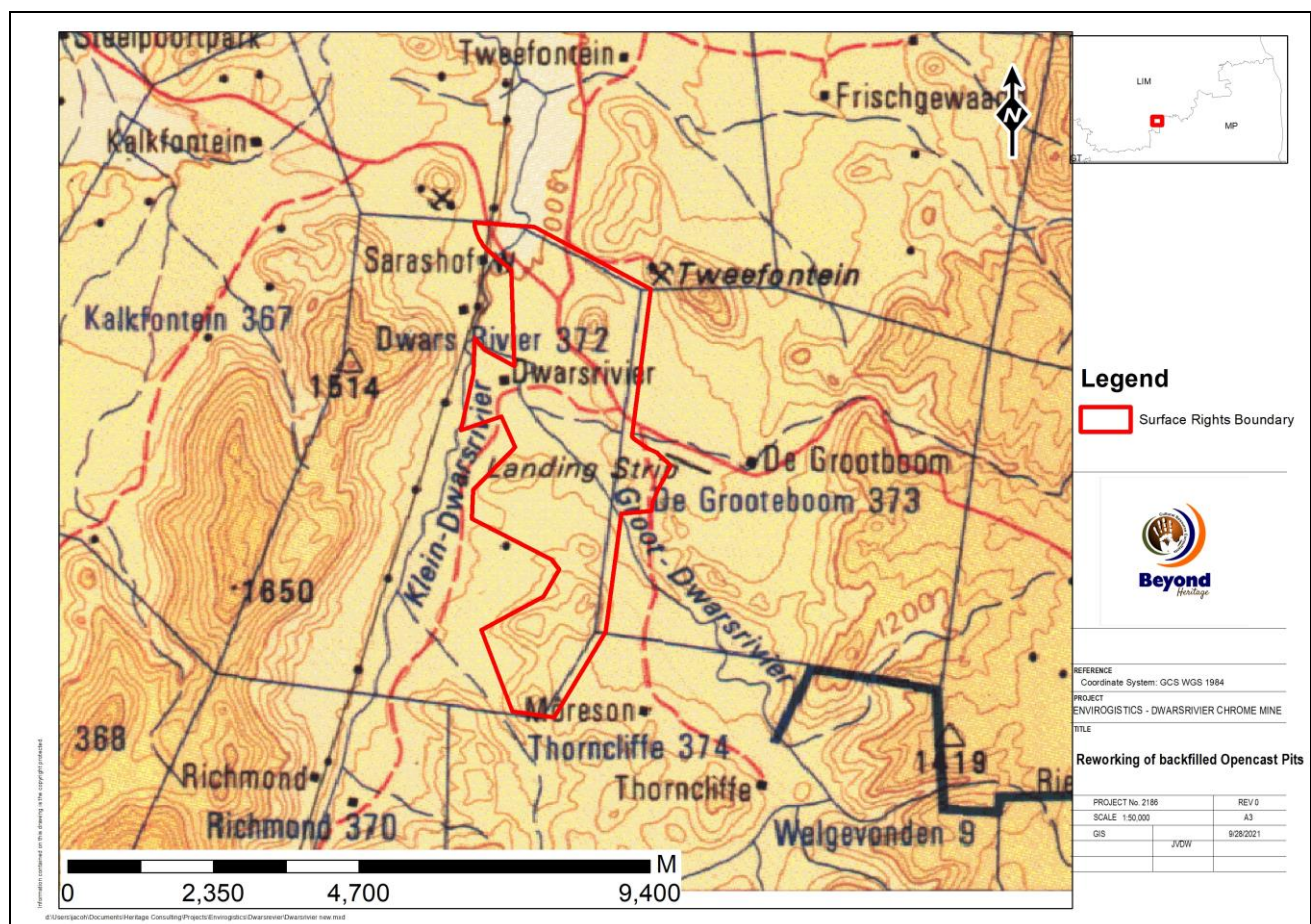


Figure 1. Regional setting of the project (1: 250 000 topographical map).

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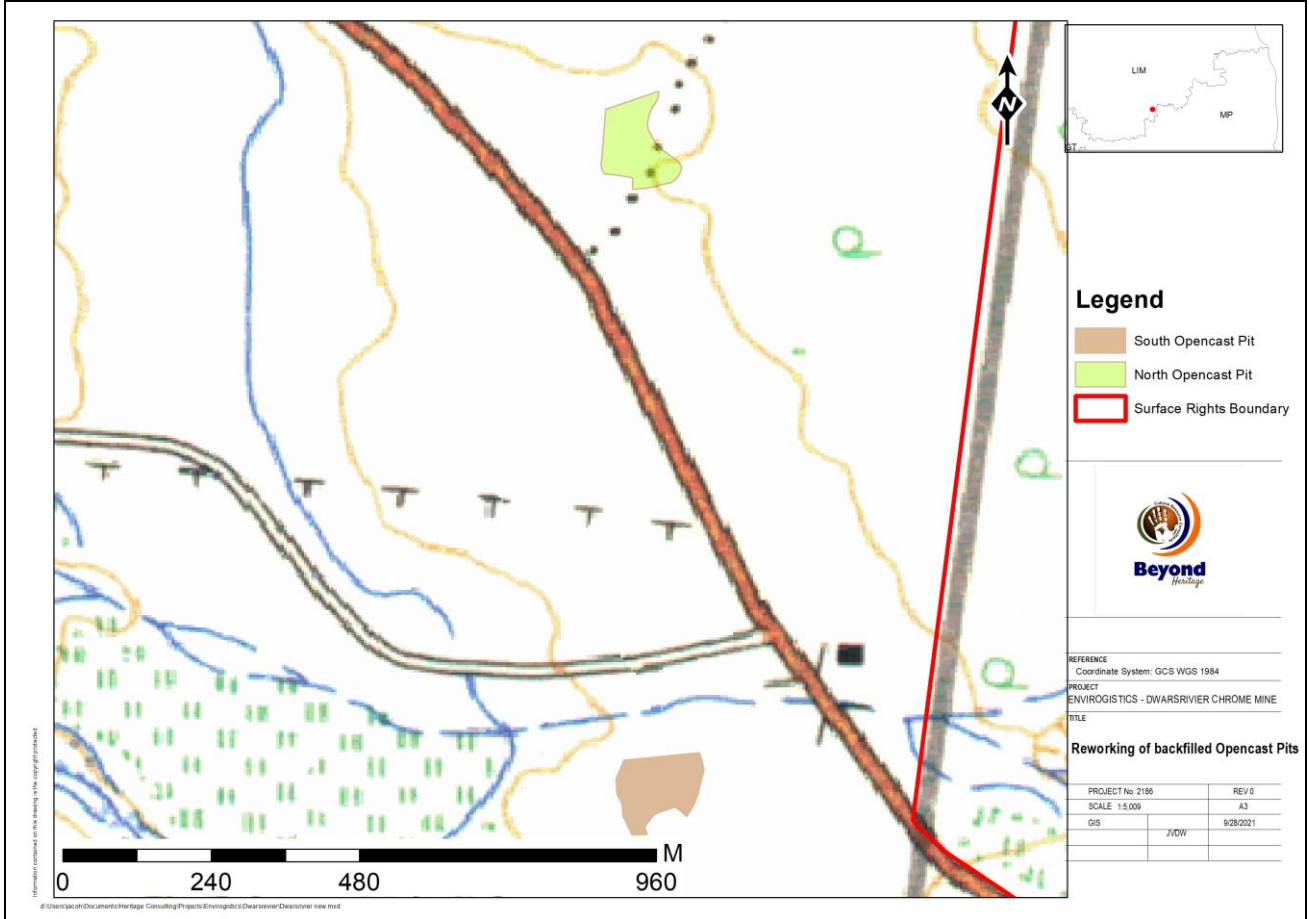


Figure 2. Local setting of the project (1: 50 000 topographical map).

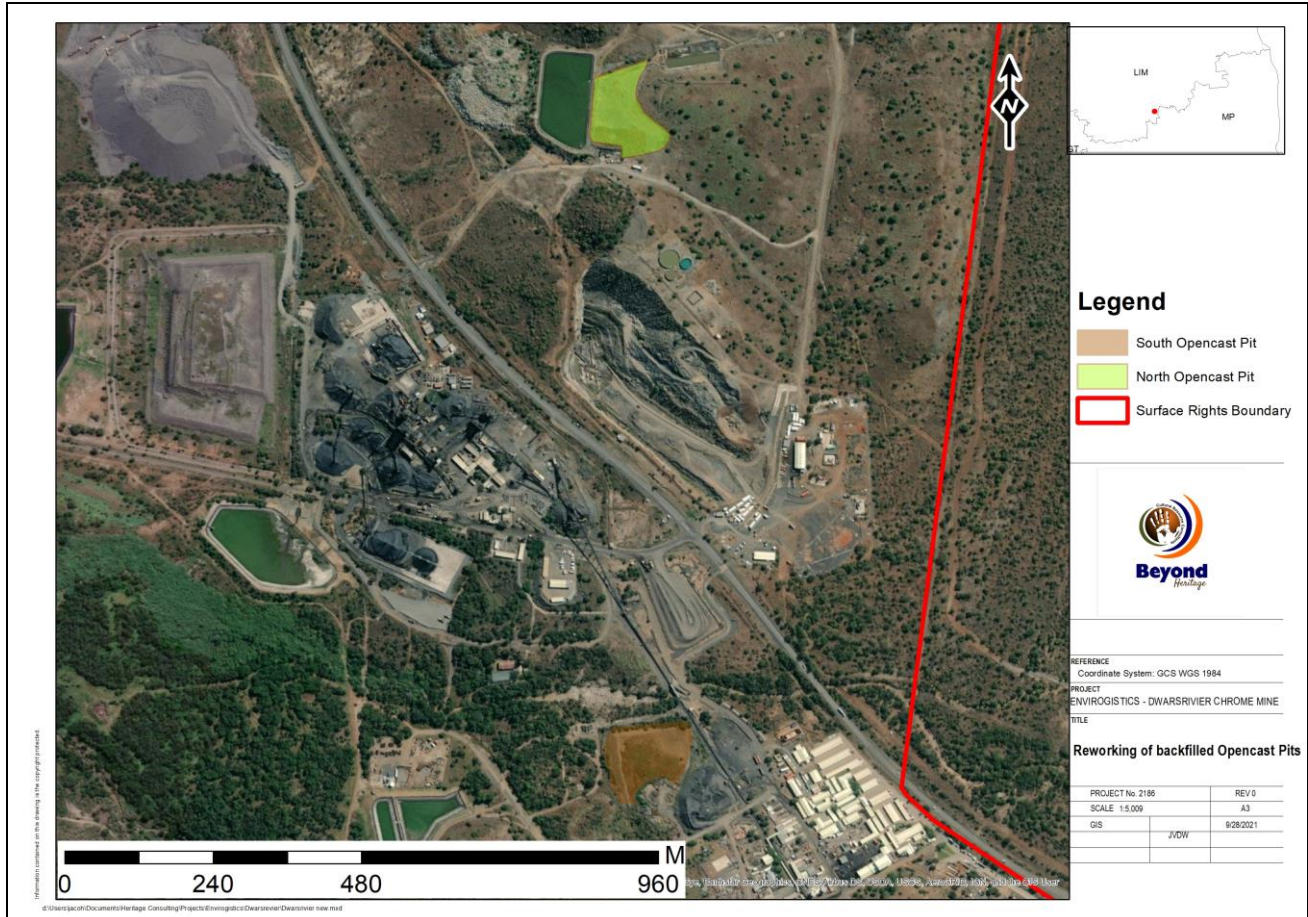


Figure 3. Aerial image of the study area. Note the extent of surrounding developments.

## 2. The Heritage Character of the Study area

### 2.1. Literature review

A brief survey of available literature was conducted to extract data and information on the area in question to provide general heritage context into which the development would be set. This literature search included published material, unpublished commercial reports and online material, including reports sourced from the South African Heritage Resources Information System (SAHRIS).

### 2.2. Background to the general area

In anticipation of other mining activities in the greater study area, archaeologists have completed numerous heritage surveys including Huffman & Schoeman 2001, 2002 a and b; van Schalkwyk 2005; Roodt 2003a, 2003b, 2003c, 2005, 2008a, 2008b; Van der Walt & Fourie 2006; Van der Walt & Celliers 2009; Van der Walt 2009; 2016 and Pistorius 2007, 2010, 2011 for various Environmental Impact Assessment Reports (EIAs) and Environmental Management Programmes (EMPs). These studies provide a good understanding of the archaeology of the area and use of the wider landscape. Since 2001, heritage surveys have recorded more than 240 sites in the greater study area, ranging from the Middle Stone Age to the recent households of farm labourers.

## Jaco van der Walt

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Middle Stone Age isolated artefacts are found scattered over the landscape. Finds typically include radial cores, triangular points and flakes. These artefacts are scattered too sparsely to be of any significance (Van der Walt 2016).

The Iron Age is characterised by the ability of these early people to manipulate and work Iron ore into implements that assisted them in creating a favourable environment to make a better living. Most of the decorated pottery found in the study area belongs to the stylistic facies known as *Eiland*. This style dates to between 1550 AD and 1750 AD and was made by Sotho-Tswana people (Huffman 2007: 186-189). These Middle Iron Age Sites do not have any stone walling associated with them and is found close to cultivatable soil. Some stylistic *Marateng* pottery were also recorded presumably in association with Late Iron Age stone walled settlements. *Marateng* pottery dates to between 1650 AD and 1840 AD (Huffman 2007: 207).

The distribution of the sites on the landscape shows different land use patterns. Many agriculturally orientated societies (making *Eiland*, *Leolo* and *Marateng* pottery) built their villages in the valleys near cultivatable alluvium. Others (probably *Ndebele*) built terraced settlements on basal slopes of the valley edge, while farm labourers usually lived in the valleys as well.

During the 19th Century, farmers lived around the edge of high meadows as a measure of protection. A few Middle Iron Age *Eiland* sites were also cited in this plateau environment. Grave sites can be expected anywhere on the landscape.

### 2.2.4. Cultural Landscape

The cultural landscape is characterised by an area that has been extensively disturbed by mining activities and in the past by agricultural activities.

### 2.2.5. Built Environment

No structures occur in the development footprint, and no further mitigation is required in terms of Section 34 of the NHRA.

### 2.2.6. Graves and Burial Sites

Two graves have been demarcated on site (located at 24°55'46.11"S; 30° 6'59.33"E and 24°54'46.43"S; 30° 7'3.87"E). Neither of these sites are in proximity to the proposed activities, with the closest grave located on South Mine more than 500m from the proposed reworking sites (Bekker 2021).

### 2.2.7. Known Battles in relation to the study area

No battles took place in the study area.

## 3. Findings

The project is located on 4ha of existing backfilled opencast pits, that was disturbed prior to 2005 (Figure 1 & 2). The previous impacts of opencast mining and backfilling would have obliterated any surface or sub surface heritage resources and the impact areas are considered to be sterile from a heritage point of view up to the level at which open cast mining took place. The project will not result in any additional clearance or construction of additional infrastructure, and only involves the reworking of backfill pits via mechanical removal

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and processing through the existing (approved) Beneficiation Plant. Therefore, the project is unlikely to disturb any heritage resources and no further heritage mitigation is recommended.



Figure 4. North Pit Google image dating to 2005.

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Figure 5. South Pit Google image dating to 2005.

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### 3.1. Paleontology

Based on the SAHRA paleontological map the project area is of low and insignificant sensitivity (Figure 3.1) and no further studies are required for this aspect.

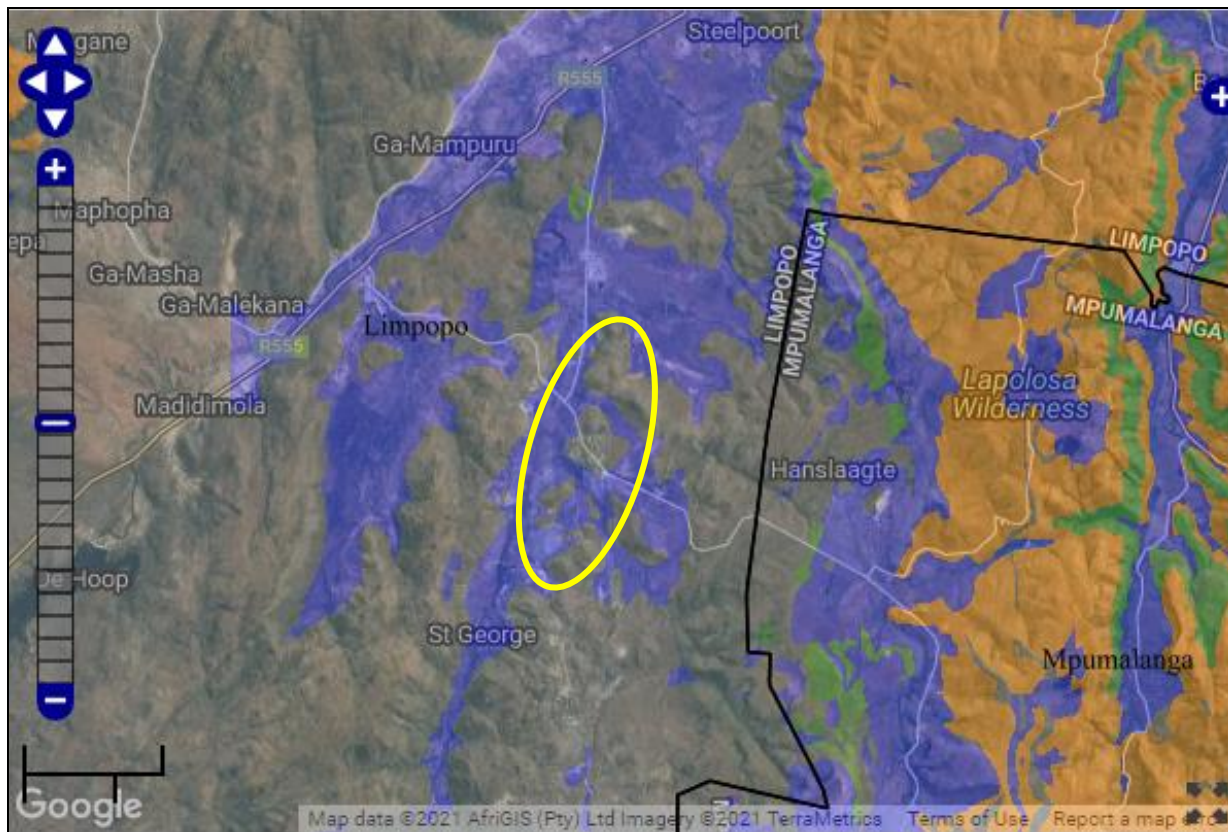


Figure 3.1. Paleontological sensitivity of the approximate study area (yellow polygon) as indicated on the SAHRA Paleontological Map (Key below)

Colour	Sensitivity	Required Action
RED	VERY HIGH	Field assessment and protocol for finds is required
ORANGE/YELLOW	HIGH	Desktop study is required and based on the outcome of the desktop study, a field assessment is likely
GREEN	MODERATE	Desktop study is required
BLUE	LOW	No palaeontological studies are required however a protocol for finds is required
GREY	INSIGNIFICANT/ZERO	No palaeontological studies are required
WHITE/CLEAR	UNKNOWN	These areas will require a minimum of a desktop study. As more information comes to light, SAHRA will continue to populate the map.



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#### 4. Conclusion

The study area has been impacted upon by the extensive development of the project site and surrounding areas from prior to 2005 and the area is therefore of low heritage potential. The impact of open cast mining and subsequent tailings facilities activities would have obliterated any indicators of heritage resources if any ever occurred in the study area. It is highly unlikely that the proposed reworking of the tailings would impact on significant heritage resources. Therefore, an application for exemption from further heritage studies is requested.

Any further queries can be forwarded to Jaco van der Walt on Cell: +27 82 373 8491 or to [jaco@heritageconsultants.co.za](mailto:jaco@heritageconsultants.co.za).

A handwritten signature in black ink, appearing to read 'Jaco van der Walt', is positioned on the left side of the page.

A business card for Jaco van der Walt, a Cultural Resource Consultant. The card features the Beyond Heritage logo on the left, which includes a stylized hand holding a globe and the text 'Cultural Resource Consultants'. To the right of the logo, the name 'Jaco van der Walt' is printed in bold, followed by his qualifications: 'BA (Pret) BA (Hons) (Archaeology) [Wits], MA (Archaeology) [Wits]'. Below this, his contact information is listed: 'Cell: 082 373 8491', 'E-mail: [jaco@heritageconsultants.co.za](mailto:jaco@heritageconsultants.co.za)', and 'Website: [www.beyondheritage.com](http://www.beyondheritage.com)'. The card also features the Beyond Heritage logo at the bottom left and a photograph of several ancient stone or metal spheres. At the very bottom, the registration number '2021/598485/07' and VAT number '4660218696' are printed.

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