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Beyond Heritage (Pty) Ltd Registration number: 2021/598485/07 VAT no. 4660218696 Private Bag X1049 Suite 34 Modimolle

7 February 2023

Attention: Mr Andrew Salomon

SAHRA Case Officer Gauteng Province

South African Heritage Resources Agency (SAHRA)

Dear Mr Salomon

Application for exemption from a Heritage Impact Assessment for the replacement of an existing water pipeline in Carlswald, Gauteng Province

1. Introduction

Beyond Heritage was appointed by Zitholele Consulting to assess the impacts on heritage resources by the replacement of an existing water pipeline and construction of a new reservoir situated in Carlswald, Midrand. The study area is situated ~7 km north-west of Halfway House and the central coordinate of the study area is -25.963262, 28.0671222 (Figure 1.1 - 1.3). The assessment consists of a desktop study as well a site visit to the study area.

1.1. Project Background

Johannesburg Water SOC Limited proposes to replace the water pipelines and construct an additional reservoir in Carlswald which is situated in Gauteng Province. The Carlswald suburb is situated approximately 24km north of Johannesburg and falls within the jurisdiction of the City of Johannesburg Municipality. The proposed pipelines alternatives are approximately 4.14km, 3.4km and 5.1km in length, with diameters ranging between 125mm and 800mm.

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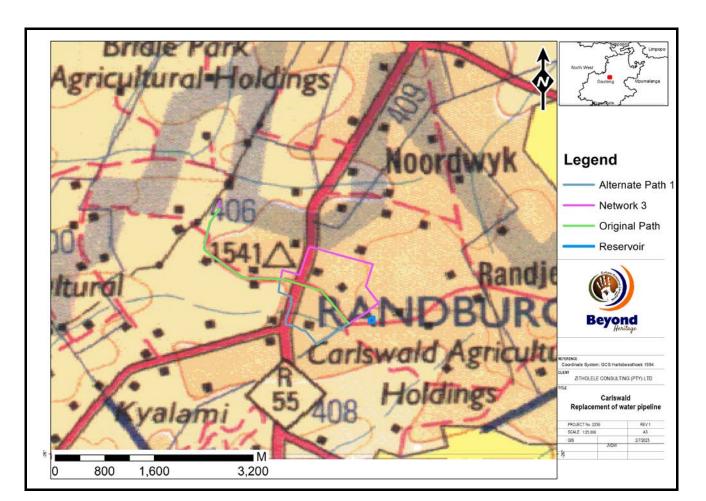


Figure 1.1. Regional setting of the project (1: 250 000 topographical map).

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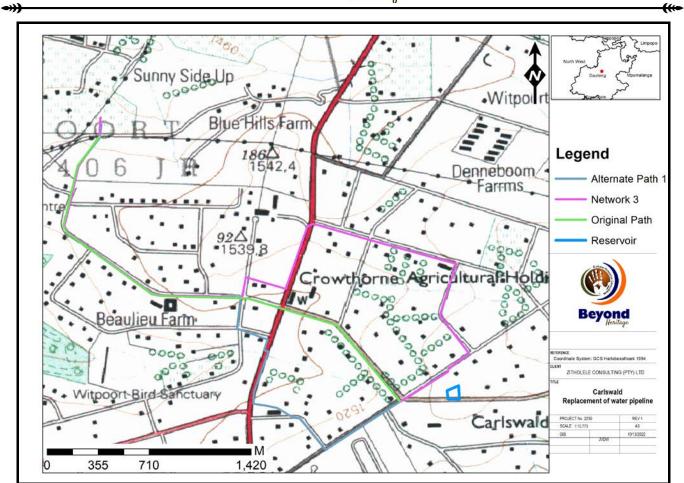


Figure 1.2. Local setting of the project (1: 50 000 topographical map).

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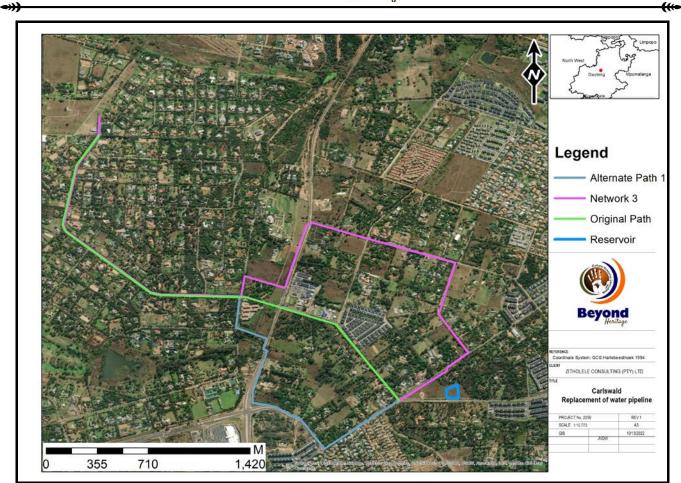


Figure 1.3. Aerial image of the study area. The study area is characterised by residential and road developments.

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).

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2.2. Background to the general area

2.2.1. The Stone Age

South Africa has a long and complex Stone Age sequence of more than 2 million years. The broad sequence includes the Later Stone Age, the Middle Stone Age, and the Earlier Stone Age. Each of these phases contain sub-phases or industrial complexes, and within these we can expect regional variation regarding characteristics and time ranges. The three main phases can be divided as follows;

* Later Stone Age (LSA); associated with Khoi and San societies and their immediate predecessors. Recently to ~30 thousand years ago

* Middle Stone Age (MSA); associated with Homo sapiens and archaic modern humans. 30-300 thousand years ago.

* Earlier Stone Age (ESA); associated with early Homo groups such as Homo habilis and Homo erectus. 400 000-> 2 million years ago.

Excavations at the Boulders Shopping Centre by Mason (1997) found various Stone Age occupations at the site with ESA tools identified which have been compared to that of the ESA tools found at Wonderboompoort and Cave of Hearths. The excavation also found MSA tools and LSA artefacts (Mason 1997). The LSA occupation of the site is speculated to have been occupied separately by very early San or Bushmen groups and then again by San later on. The second LSA occupation period bore the most stone tools found during the excavation (Mason 1997). LSA communities at Boulders occupied the site until around AD 1100 and AD 1200, coexisting with Iron Age communities that would later settle there (van Schalkwyk 1998). Van Schalkwyk (1998) documented an ESA site a few kilometres south east of the project area. He did however deduce that ESA occupations in the area were only periodic and not permanent. An MSA site was identified by Mason (2012) at Glenferness cave whereby an array of MSA artefacts were founds. In the Eastern Juskei River Valley, an LSA site, referred to as the Mia site was found and dated to around 12 000 years ago (Mason 2012). The Mia site is unique in that it is an LSA site with a built stone shelter associated with LSA artefacts (Mason 2012). It is presumed that the tools and shelter were made from local diabase rocks from the Allendale Road dyke. In Blue Hills, Huffman (1999), documented scatters of LSA tools.

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2.2.2. The Iron Age

The Iron Age as a whole represents the spread of Bantu speaking people and includes both the pre-Historic and Historic periods. It can be divided into three distinct periods:

- The Early Iron Age: Most of the first millennium AD.
- The Middle Iron Age: 10th to 13th centuries AD
- The Late Iron Age: 14th century to colonial period.

The Iron Age is characterised by the ability of these people to manipulate and work Iron ore into implements that assisted them in creating a favourable environment to make a better living. The Boulders excavation found that the earliest Iron Age settlement of the area was occupied between AD 350 and AD 600 by ancestors of Tswana speaking communities (Mason 1997). Associated pottery was compared to similar pottery from Zeerust to determine its age. These Tswana speaking Iron Age communities occupied the area throughout the Iron Age and cultivated crops and domesticated livestock. The Glenferness Cave also shows evidence of Iron Age occupation. Evidence of iron smelting and smithing was documented at the Melville Koppies area whereby iron was being worked from around AD 1060 (Bergh 1999). Around the 18th and 19th centuries, Fokeng communities occupied Klipriviersberg which is home to extensive stone walling. Pottery found at Klipriviersberg is a combination of *Ntsuanatsatsi* and *Olifantspoort* indicating interaction amongst groups (Huffman 2007). The occupation and of the stone walled sites is speculated to have ended around 1823 when Mzilikazi entered this area and communities fled the region (Huffman 2007).

2.2.3. Historical Overview

During the mid-17th century Europeans started to settle in modern-day Cape Town. During and after the conflict caused by the Mfecane (1820-1840), during the reign of king kaSenzangakhona Zulu, known as Shaka, Dutch-speaking farmers started to migrate to the interior regions of South Africa. A period that is marked by various skirmishes and battles between the local inhabitants, Dutch settlers and the British (Giliomee & Mbenga 2007). During the 1820s, Mzilikazi entered the area around Johannesburg and proceeded to raid surrounding communities in order to gain power over the landscape.

By 1839 and 1840, farms in present day Johannesburg and Krugersdorp were divided with new boundaries being established with the arrival of Voortrekkers who began undertaking agricultural activities in the area (Bergh 1999). During the 1880s, the Halfway House hotel was built as a stopover station in the area where travellers between Johannesburg and Pretoria could rest (van Schalkwyk 1998). By 1892, Midrand had established its first railway station.

Early developments in Midrand were based on agricultural activities but has since seen a large scale development of residential suburbs due to its central location between Johannesburg and Pretoria and by 1981, Midrand was established as a municipality. It has since been incorporated into the City of Johannesburg Municipality.

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2.2.4. Anglo-Boer War

During the Anglo-Boer War of 1899-1902, British military were stationed in what is now the Escom Training Centre and at Bibury Grange (van Schalkwyk 1998). The British, under the command of Lord Roberts had come through Midrand on their journey towards Pretoria which they then occupied in June of 1990. Midrand saw skirmishes between the British and the Boer but no battles happened there. The Boers attempted to sabotage the railway lines which was under British influence.

2.2.5. CRM reports

Several unpublished CRM projects were conducted in the general study area (van der Walt 2022, van Schalkwyk 1998; 2017, Huffman 1999, Pelser 2017) which found stone tools, a historical farm compound, stone walling, historical structures, and a Stone Age factory site. Some studies reported no finds of heritage value.

Author	Year	Project	Findings
Van der Walt, J.	2022	Heritage Impact Assessment for the Proposed Crowthorne Ext 27 Township, City of Johannesburg Metropolitan Municipality.	None
Van Schalkwyk, J.	2017	Phase 1 Cultural Heritage Impact Assessment: The Proposed Construction of the Lulamisa to Diepsloot East to Blue Hills to Crowthorne 88Kv Power Line and Two Substations, Gauteng Province.	None
Huffman, T.N.	1999	Archaeological Survey of Blue Hills Farm, Midrand, Phase-1 Report Prepared for Cooper Drummond Environmental Consultants.	LSA artefacts, and a Historical farm compound.
Van Schalkwyk, J.	1998	A Survey of Cultural Resources in the Midrand Municipal Area, Gauteng Province,	Stone walling, informal cemeteries, homestead remains, a Stone Age factory site, an old railway viaduct, multiple historical structures.

Table 1. Studies consulted for this project include:

2.2.6. Society and Google Earth Monuments

No known grave sites are indicated close to the study area.

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2.3. Cultural Landscape

Midrand is a built-up area situated between Pretoria and Johannesburg and the project area lies in various residential suburbs along existing water pipelines. The area prior to development was fallow and sparsely populated and used for agricultural activities (Figure 2.1 to Figure 2.3).

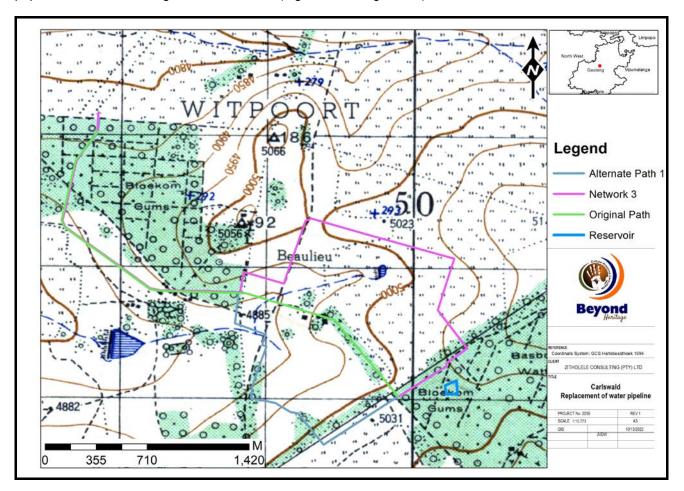


Figure 2.1. 1939 Topographic map of the study area prior to development and showing widespread agricultural activities as well as Bluegum Tree (Eucalyptus) orchards.

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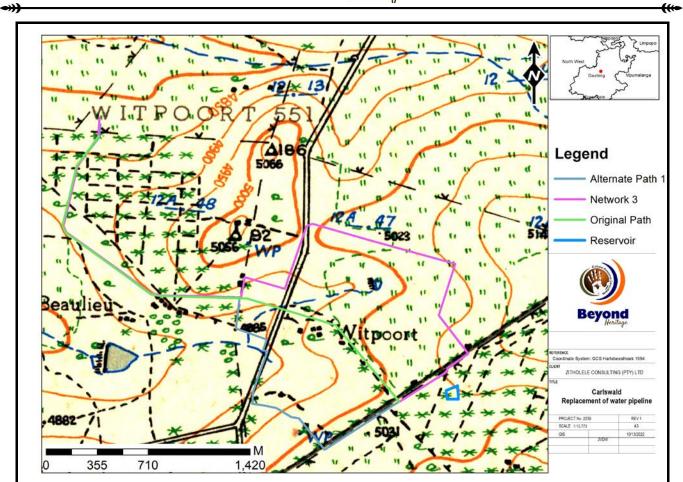


Figure 2.2. 1957 Topographic map of the study area indicating the development of roads in the area. The majority of the area is cultivated.

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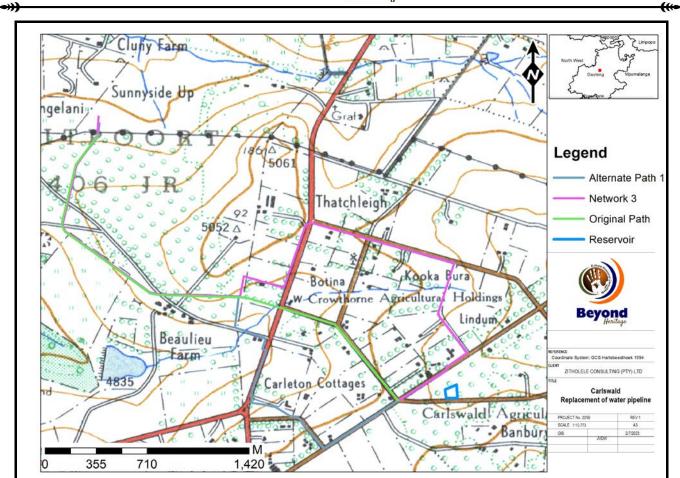


Figure 2.3. 1964 Topographic map of the study area indicating the development of more roads, power lines, and multiple structures across the area.

3. Findings

3.1. Heritage Resources

The three alternatives are located within the road reserves within the built-up suburbs. The surrounding environment consists of a suburban landscape made up of large properties and upscale housing developments. Existing infrastructure includes various pipelines, powerlines and tar roads traversing through the suburb (Figure 3.1 to Figure 3.6). The landscape surrounding the proposed project area mainly focuses on equestrian activities, with most properties built to accommodate some form of equestrian sport or livery. The study area was visited over a period of 1 day. After the site visit the layout was slightly altered resulting in a small area not covered during the fieldwork (Figure 3.7). These areas are altered and considered to be of low heritage potential, and are not expected to affect the outcomes of this assessment.

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Figure 3.1. General site conditions - The proposed lines run from an open area near the Equidome in Beaulieu, Kayalami.



Figure 3.3. General site conditions - Drainage systems built onto the road reserves may be older than 60 years.



Figure 3.2. General site conditions - The proposed lines running along the road reserves within the suburbs.

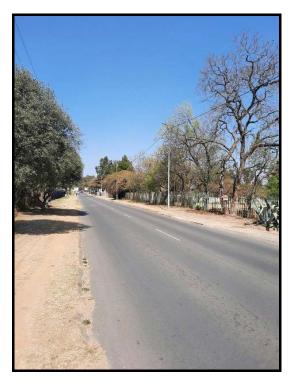


Figure 3.4. General site conditions - Network 1 alternate route.

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Figure 3.5. General site conditions along the Network 2 alternative route - The proposed lines.



Figure 3.6. General site conditions - Network 3 alternate route.

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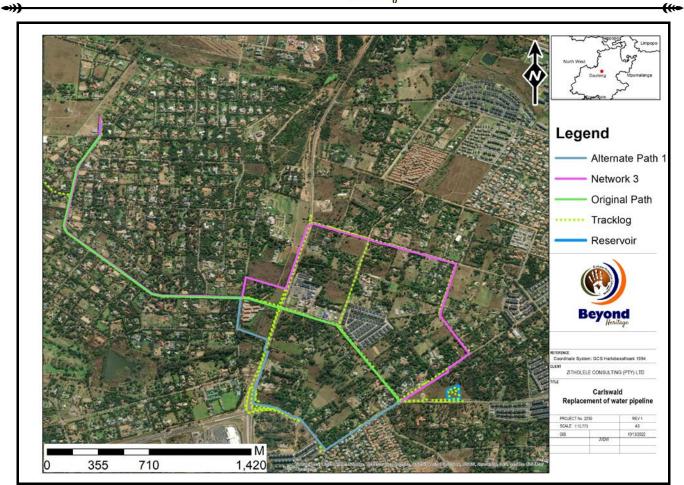


Figure 3.7. Tracklog of the survey path in green.

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3.2. Paleontological Resources

Based on the SAHRA paleontological map the study area is of insignificant/zero senstivity (Figure 3.8) and no further palaeontological studies are necessary.

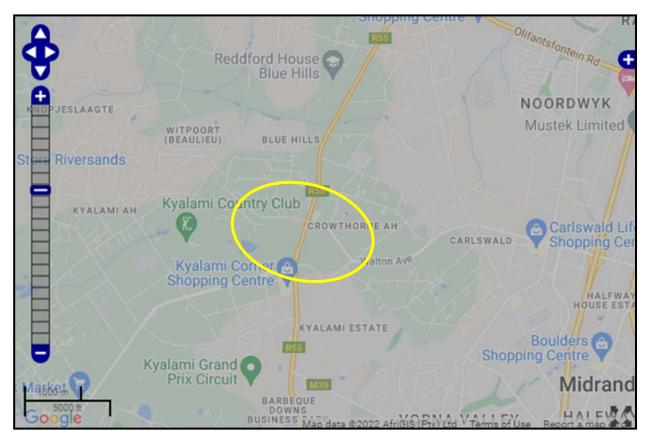


Figure 3.8 SAHRIS palaeosensitivity map for the site for the proposed replacement of water pipeline in Carlswald shown within the yellow polygon. Background colours indicate the following degrees of sensitivity:

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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The project area is completely transformed through the establishment of existing water pipelines as well as residential suburbs (Figure 2.5). Based on Topographic maps, the area was undeveloped and used for agricultural activities until 1957 with the establishment of roads and then the subsequent establishment of structures from 1964 (Figure 2.3). The study area was completely transformed into various residential suburbs around the project area throughout the years (Figure 1.3). No heritage indicators appear on historical maps prior to the establishment of the residential suburbs, and previous agricultural activities are visible (Figure 2.1), indicating that the study area is of low heritage potential. This was confirmed during the site visit, and no evidence of heritage resources was noted (Figure 1.4). According to the SAHRA paleontological map, the palaeontological sensitivity is determined as zero/ insignificant, and no further studies are required for this aspect (Figure 3.8).

An application for exemption from further heritage studies is supported for the project due to the lack of heritage resources and the extent of the transformation of the area.

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



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5. References

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- Van Schalkwyk, J. 2017. Phase 1 Cultural Heritage Impact Assessment: The Proposed Construction of the Lulamisa to Diepsloot East to Blue Hills to Crowthorne 88Kv Power Line and Two Substations, Gauteng Province.



environmental affairs

Department: Environmental Affairs REPUBLIC OF SOUTH AFRICA

DETAILS OF THE SPECIALIST, DECLARATION OF INTEREST AND UNDERTAKING UNDER OATH

	(For official use only)
File Reference Number:	
NEAS Reference Number:	DEA/EIA/
Date Received:	

Application for authorisation in terms of the National Environmental Management Act, Act No. 107 of 1998, as amended and the Environmental Impact Assessment (EIA) Regulations, 2014, as amended (the Regulations)

PROJECT TITLE

PROPOSED UPGRADE OF THE WATER PIPELINE NETWORK IN CARLSWALD, GAUTENG PROVINCE

Kindly note the following:

- 1. This form must always be used for applications that must be subjected to Basic Assessment or Scoping & Environmental Impact Reporting where this Department is the Competent Authority.
- 2. This form is current as of 01 September 2018. It is the responsibility of the Applicant / Environmental Assessment Practitioner (EAP) to ascertain whether subsequent versions of the form have been published or produced by the Competent Authority. The latest available Departmental templates are available at https://www.environment.gov.za/documents/forms.
- 3. A copy of this form containing original signatures must be appended to all Draft and Final Reports submitted to the department for consideration.
- 4. All documentation delivered to the physical address contained in this form must be delivered during the official Departmental Officer Hours which is visible on the Departmental gate.
- 5. All EIA related documents (includes application forms, reports or any EIA related submissions) that are faxed; emailed; delivered to Security or placed in the Departmental Tender Box will not be accepted, only hardcopy submissions are accepted.

Departmental Details

Postal address: Department of Environmental Affairs Attention: Chief Director: Integrated Environmental Authorisations Private Bag X447 Pretoria 0001

Physical address: Department of Environmental Affairs Attention: Chief Director: Integrated Environmental Authorisations Environment House 473 Steve Biko Road Arcadia

Queries must be directed to the Directorate: Coordination, Strategic Planning and Support at: Email: EIAAdmin@environment.gov.za

Details of Specialist, Declaration and Undertaking Under Oath

1. SPECIALIST INFORMATION

Specialist Company Name:	Beyond Heritage (Pty) Ltd, (Heritage and Archaeology)				
B-BBEE	Contribution level (indicate 1		Percentage		
	to 8 or non-compliant)		Procurement		
			recognition		
Specialist name:	Mr. J. van der Walt				
Specialist Qualifications:	MA Archaeology (Wits)				
Professional	Accredited Professional Archaeologist (ASAPA) - 159				
affiliation/registration:	Accredited Professional Heritage Practitioner (APHP) - 114				
Physical address:					
Postal address:	Private Bag X 1049, Suite 34, Modimolle				
Postal code:	0510	Cell:	082 373 8491		
Telephone:		Fax:			
E-mail:	jaco@heritageconsultants.co.za				

2. DECLARATION BY THE SPECIALIST

I, _Jaco van der Walt _____, declare that -

- I act as the independent specialist in this application;
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, Regulations and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, Regulations and all other applicable legislation;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the competent authority all material information in my possession that
 reasonably has or may have the potential of influencing any decision to be taken with respect to the application by
 the competent authority; and the objectivity of any report, plan or document to be prepared by myself for
 submission to the competent authority;
- all the particulars furnished by me in this form are true and correct; and
- I realise that a false declaration is an offence in terms of regulation 48 and is punishable in terms of section 24F of the Act.

Signature of the Specialist

Beyond Heritage Name of Company:

7/8/2023

Date

Details of Specialist, Declaration and Undertaking Under Oath

3. UNDERTAKING UNDER OATH/ AFFIRMATION

I, _Jaco van der Walt _____, swear under oath / affirm that all the information submitted or to be submitted for the purposes of this application is true and correct.

Signature of the Specialist

Beyond Heritage

Name of Company

2027 Date

Signature of the Commissioner of Oaths

8/2023 -Date . Lond metar. PL.S. No. PL.S. No. 1081-D KOMMISARIS VAN EDE COMMISIONER COM KOMMISARIS VAN EDE COMMISIONER OF OATHS OF OATHS

LANTEK SA Professionale Landmeters Professional Land Surveyors Posbus / PO Box 121 Modimolle / Nylstreem 0510

Details of Specialist, Declaration and Undertaking Under Oath