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**CK 2006/014630/23** **VAT NO.: 4360226270**

**A Phase 1 HIA Report for the Proposed Bela-Bela Commercial Park Development  
on the Remainder of Portion 25 of the farm Het Bad 465KR  
in the Bela-Bela Local Municipality of the Limpopo Province**

For:

***Mang Geoenviro Services***  
**6 Eros Road**  
**Faerie Glen**  
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REPORT: **APAC023/64**

by:

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***July 2023***

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**Although all efforts are made to identify all sites of cultural heritage (archaeological and historical) significance during an assessment of study areas, the nature of archaeological and historical sites are as such that it is always possible that hidden or subterranean sites, features or objects could be overlooked during the study. APELSE Archaeological Consulting can't be held liable for such oversights or for costs incurred as a result thereof.**

**Clients & Developers should not continue with any development actions until SAHRA or one of its subsidiary bodies has provided final comments on this report. Submitting the report to SAHRA is the responsibility of the Client unless required of the Heritage Specialist as part of their appointment and Terms of Reference**

A handwritten signature in black ink, appearing to be 'A. El', is centered on the page.

## SUMMARY

APelser Archaeological Consulting cc (APAC cc) was appointed by Mang Geoenviro Services, on behalf of the Bela-Bela Local Municipality, to conduct a Phase 1 Heritage Impact Assessment for the proposed Bela-Bela Commercial Park Development. The study and development area are located in Bela-Bela in the Limpopo Province. The proposed development is situated on the Remainder of Portion 25 of the original farm Het Bad 465KR.

The literature review indicates that there are some cultural heritage (archaeological & historical) sites and features in the larger geographical area within which the study area falls. No sites, features, or material of cultural heritage (archaeological and/or historical) origin were identified and recorded in the study and the proposed development area during the June 2023 field assessment. This report discusses the results of both the background literature research and physical assessment and provides recommendations on the way forward.

From a Cultural Heritage point of view, it was determined that the proposed Bela-Bela Commercial Park Development should be allowed to continue taking into consideration the recommendations provide at the end of the report.

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## **1. INTRODUCTION**

APelser Archaeological Consulting cc (APAC cc) was appointed by Mang Geoenviro Services, on behalf of the Bela-Bela Local Municipality, to conduct a Phase 1 Heritage Impact Assessment for the proposed Bela-Bela Commercial Park Development. The study and development area are located in Bela-Bela in the Limpopo Province. The proposed development is situated on the Remainder of Portion 25 of the original farm Het Bad 465KR.

The literature review indicates that there are some cultural heritage (archaeological & historical) sites and features in the larger geographical area within which the study area falls. No sites, features, or material of cultural heritage (archaeological and/or historical) origin were identified and recorded in the study and the proposed development area during the June 2023 field assessment.

The location and boundaries of the study & development area footprint were provided to the Specialist, and the assessment focused on this area.

## **2. TERMS OF REFERENCE**

The Terms of Reference for the study was to:

1. Identify all objects, sites, occurrences and structures of an archaeological or historical nature (cultural heritage sites) located on the portion of land that will be impacted upon by the proposed development;
2. Assess the significance of the cultural resources in terms of their archaeological, historical, scientific, social, religious, aesthetic and tourism value;
3. Describe the possible impact of the proposed development on these cultural remains, according to a standard set of conventions;
4. Propose suitable mitigation measures to minimize possible negative impacts on the cultural resources;
5. Review applicable legislative requirements;

## **3. LEGISLATIVE REQUIREMENTS**

Aspects are dealt with mainly in. The National Heritage Resources Act (Act 25 of 1999) and the National Environmental Management Act (Act 107 of 1998) are the two main legislations concerning the conservation of cultural resources, used as guidelines when conducting the Heritage Impact Assessment.

### **3.1. The National Heritage Resources Act (Act 25 of 1999)**

According to the National Heritage Resources Act (Act 25 of 1999) (NHRA), the following is protected as cultural heritage resources:

- a. Archaeological artifacts, 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
- 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 paleontological importance
- g. Graves and burial grounds
- h. Sites of significance relating to the history of slavery
- i. Movable objects (e.g., archaeological, paleontological, meteorites, geological specimens, military, ethnographic, books etc.)

The Heritage Impact Assessment (HIA) process is done to determine whether there are any heritage resources located within the area to be developed as well as to determine the possible impacts of the proposed development. An Archaeological Impact Assessment (AIA) only looks at archaeological resources, such as material remains of human life or activities which are at least 100 years of age, and which are of archaeological interest. A 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 000m<sup>2</sup> or involve three or more existing erven or subdivisions thereof
- d. Re-zoning of a site exceeding 10 000m<sup>2</sup>
- e. Any other category provided for in the regulations of SAHRA or a provincial heritage authority

## **Structures**

Section 34(1) of the Act states that no person may demolish any structure or part thereof that is older than 60 years without a permit issued by the relevant provincial heritage resources authority.

A structure refers to any building, works, device or other facility made by people, and which is fixed to land, and includes any fixtures, fittings and equipment associated therewith.

To alter means any action taken that affects the structure, appearance or physical properties of a place or object, whether by way of structural or other works, by painting, plastering or the decoration or any other means.

## **Archaeology, palaeontology, and Meteorites**

Section 35(4) of the Act deals with archaeology, palaeontology, and meteorites. The Act states that no person may, without a permit issued by the responsible heritage resources authority (national or provincial)

- a. destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or paleontological site or any meteorite;
- b. destroy, damage, excavate, remove from its original position, collect or own any archaeological or paleontological material or object or any meteorite;
- c. trade in, sell for private gain, export or attempt to export from the Republic any category of archaeological or paleontological material or object, or any meteorite; or
- d. bring onto or use at an archaeological or paleontological site any excavation equipment or any equipment that assists in the detection or recovery of metals or archaeological and paleontological material or objects, or use such equipment for the recovery of meteorites.
- e. alter or demolish any structure or part of a structure which is older than 60 years as protected.

**The above mentioned may only be disturbed or moved by an archaeologist, after receiving a permit from the South African Heritage Resources Agency (SAHRA). In order to demolish such a site or structure, a destruction permit from SAHRA will also be needed.**

## **Human remains**

Graves and burial grounds are divided into the following:

- a. ancestral graves
- b. royal graves and graves of traditional leaders
- c. graves of victims of conflict
- d. graves designated by the Minister
- e. historical graves and cemeteries
- f. human remains

In terms of Section 36(3) of the National Heritage Resources Act, no person may, without a permit issued by the relevant heritage resources authority:

- i. destroy, damage, alter, exhume or remove from its original position or otherwise disturb the grave of a victim of conflict, or any burial ground or part thereof which contains such graves;
- ii. destroy, damage, alter, exhume, or remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority; or
- iii. bring onto or use at a burial ground or grave referred to in paragraph (a) or (b) any excavation, or any equipment which assists in the detection or recovery of metals.

Human remains that are less than 60 years old are subject to provisions of the Human Tissue Act (Act 65 of 1983) and to local regulations. Exhumation of graves must conform to the standards set out in the **Ordinance on Excavations (Ordinance no. 12 of 1980)** (replacing the old Transvaal Ordinance no. 7 of 1925).

Permission must also be gained from the descendants (where known), the National Department of Health, Provincial Department of Health, Premier of the Province, and local police. Furthermore, permission must also be gained from the various landowners (i.e., where the graves are located and where they are to be relocated to) before exhumation can take place.

Human remains can only be handled by a registered undertaker, or an institution declared under the **Human Tissues Act (Act 65 of 1983 as amended)**.

### **3.2. The National Environmental Management Act (No. 107 of 1998)**

This Act states that a survey and evaluation of cultural resources must be done in areas where development projects, that will change the face of the environment, will be undertaken. The impact of the development on these resources should be determined and proposals for the mitigation thereof are made.

Environmental management should also take the cultural and social needs of people into account. Any disturbance of landscapes and sites that constitute the nation's cultural heritage should be avoided as far as possible and where this is not possible the disturbance should be minimized and remedied.

The specific requirements that specialist studies and reports must adhere to are contained in Appendix 6 of the EIA Regulations.



## **4. METHODOLOGY**

### **4.1. Review of literature**

A review of available literature was undertaken in order to place the development area in an archaeological and historical context. The sources utilized in this regard are indicated in the bibliography. These include Bergh (1999), Huffman (2007) & Lombard et.al (2012).

### **4.2. Field survey**

The field assessment component of the study was conducted on the 29<sup>th</sup> of June 2023 according to generally accepted HIA practices and aimed at locating all possible objects, sites, and features of heritage significance in the area of the proposed development. The location/position of all sites, features and objects is determined by means of a Global Positioning System (GPS) where possible, while detail photographs are also taken where needed. Where possible grids were walked in the area where development is proposed.

### **4.3. Documentation**

All sites, objects, features, and structures identified are documented according to a general set of minimum standards. Co-ordinates of individual localities are determined by means of the Global Positioning System (GPS). The information is added to the description in order to facilitate the identification of each locality.

## **5. PROJECT DESCRIPTION**

The proposed Bela-Bela Commercial Park development will include Business, Commercial/Industrial developments, a Skills Training Facility, Amphitheatre, Airfield (existing), Cemetery (existing), Waste Water Treatment Works (existing to be upgraded) and Landfill site (existing).

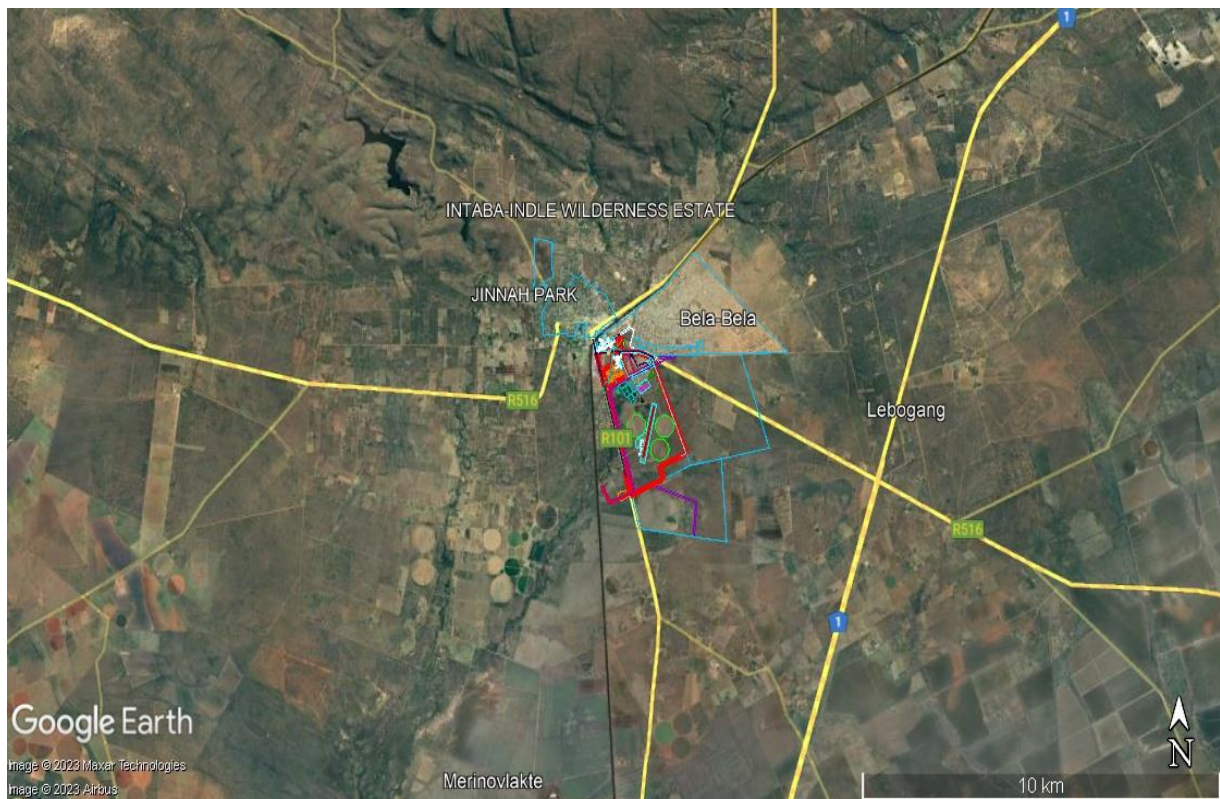
## **6. DESCRIPTION OF THE AREA**

The study & proposed development area is located in Bela-Bela, on the Remainder of Portion 25 of the original farm Het Bad 465KR. The development, to be known as the Bela-Bela Commercial Park, is situated in the Bela-Bela Local Municipality of the Limpopo Province.

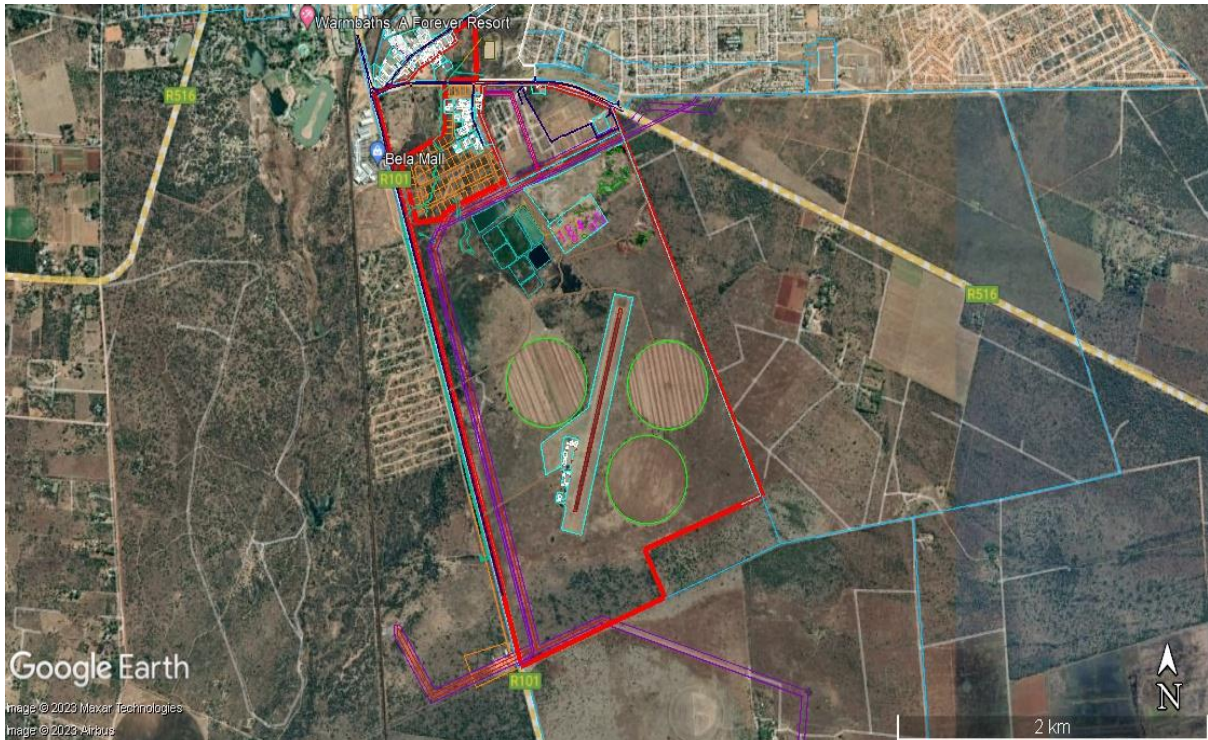
The topography of the study area is fairly flat and open, with little or no rocky outcrops or ridges present. Sections of the area contains a wetland and a stream running through it. Large parts of the area have been extensively impacted in the past through agricultural activities (ploughing and crop growing), while others have been impacted by developments such as the existing Airfield, sewer ponds/WWT works, Landfill Site and other smaller business-related developments. The original natural and historical landscape have been severely altered over recent historical times, and as a result, if any cultural heritage

(archaeological and/or historical) sites, features or material of any significance did exist here, it would have been extensively disturbed and largely destroyed.

Dense vegetation in parts of the study and proposed development area hampered visibility on the ground to some extent.



**Figure 1: General location of the study & proposed development area (Google Earth 2023).**



**Figure 2: Closer view of the study area and proposed Bela-Bela Commercial Park Development (Google Earth 2023).**

## 7. DISCUSSION

### 7.1 Stone age

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 into three periods as listed below. It is 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).

There are no known Stone Age sites or artifacts in the study area. The closest known Stone Age sites are those of the well-known Early Stone Age site at Wonderboompoort, a number of sites in the Magaliesberg area and some Middle to Late Stone Age sites east of Bela-Bela and Settlers (Bergh 1999: 4). Stone Age people occupied the larger area since earliest times. This, for example, is evidenced by the site they used to occupy in the Wonderboom neck, probably dating back as much as 200 000 years ago. Tools derived from these people's habitation of the area are found in a number of areas close to the Apies River to the west

and the Hartebeesspruit to the east. Middle and Late Stone Age people also roamed over the area, sheltering close to the river banks, with the latter group usually settling in caves and rock shelters (Van Schalkwyk 2013: 7).

***No Stone Age sites or material were identified in the study area during the June 2023 field assessment. If any were to be present they would most likely be individual stone tools or low density scatters in open-air surface scatters around the area.***

## 7.2 Iron age

The Iron Age is the name given to the period of human history when metal was mainly used to produce metal artifacts. In South Africa it can be divided in two separate phases (Bergh1999: 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.

There are no known Iron Age sites close to and in the study area, although there are quite a large number of LIA stone walled sites in the larger geographical area (Bergh 1999: 7). The closest known EIA site is located at Broederstroom (p.6). Pyramid Koppies to the south-west of the study area are known to contain LIA stone walled sites. Iron Age occupation of the area did not start much before the 1500s. By that time, groups of Tswana and Ndebele speaking people were moving into the area, occupying the different hills and outcrops, using the ample resources such as grazing, game and metal ores. During the early decades of the 19th century, the Tswana- and Ndebele-speakers were dislodged by the Matabele of Mzilikazi. Internal strife caused Mzilikazi, a general of King Shaka, and his followers to move away from the area between the Thukela and Mfolozi River (KwaZulu-Natal). Eventually, after a sojourn in the Sekhukhuneland area, followed by a short stay in the middle reaches of the Vaal River, they settled north of the Magaliesberg. One of three main settlements established by them, eKungwini, was on the banks of the Apies River, just north of Wonderboompoort. However, no remains of this settlement have ever been identified (Van Schalkwyk 2013: 7-8).

The research of Prof. Tom Huffman indicates that the following Iron Age traditions might have been present in the larger geographical area in which the study area is located. This includes the Mzonjani facies (related to the Broederstroom site) of the Urewe Tradition dating to between AD450 and AD750 (Huffman 2007: 127); the Uitkomst facies of the same tradition dating to between AD1650 & AD1820 (p. 171); the Olifantspoort facies of the



same, dating to between AD1500 & AD1700 (p.191) and finally the Buispoort facies of the Urewe Tradition dating to between AD1700 & AD1840 (p.203).

***No Iron Age sites, features or material were identified in the area during the June 2023 field assessment.***

### 7.3 Historic age

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 first Europeans to move through and into the area were the groups of Schoon and McLuckie and the missionaries Archbell and Moffat in 1829 (Bergh 1999: 12). They were followed by others such as Andrew Smith (1835), Cornwallis Harris (1836) and David Livingstone in 1847 (Bergh 1999: 13). These groups were closely followed by the Voortrekkers after 1844 and Pretoria was established in 1855 (Bergh 1999: 14-17). White settlers started to occupy huge tracts of land, claiming it as farms after the late 1840s. Of these, some of the earliest were Lucas Bronkhorst (Groenkloof), David Botha (Hartebeestpoort – Silverton) and Doors Erasmus (Wonderboom). With the establishment of Pretoria (1850) services such as roads, started to develop. An increase in population also demanded more food, which stimulated development of farming on the alluvial soils on the banks of the Apies River, close to the water (Van Schalkwyk 2013: 8).

Bela-Bela (Tswana/Pedi for "the pot that boils"), also known by its original name Warmbaths is a town in the Limpopo Province of South Africa. The town derives its name from the geothermic hot springs around which the town was built.

When the Tswana tribes first moved into the region in about the 1800s, they discovered hot springs in the area. The Voortrekker Carl Van Heerden established the first farm in what is now Bela-Bela and called it Het Bad. In 1873, President Burgers' Transvaal government bought the land and established a resort called Hartingsburg after the prominent Dutch biologist Pieter Harting. The British occupied the town during the Anglo-Boer War, and renamed the post office Warm Baths in 1903, and proclaimed the boundaries of Warmbaths to be the entire farm of Het Bad.

In 1920 Warmbaths was proclaimed a township and the township was designed by architect John Abraham Moffat in that year. In 1950, it became a magisterial district. In 1932 Warmbaths became a village town and was established as a town council in 1960. On 14 June 2002] the South African government officially renamed the town to Bela-Bela (meaning "boiling boiling") [from [www.wikipedia.org](http://www.wikipedia.org)].

The oldest map for the farm Het Bad that could be obtained from the Chief Surveyor General's database ([www.csg.dla.gov.za](http://www.csg.dla.gov.za)) is for Portion 1 and dates to 1903 (**CSG Document 10EPPN01**). The farm was then numbered as No.109 and was located in the District of Warmbaths, Ward of Nylstroom and the Transvaal Colony. The whole farm was originally granted to one C.J. Minnaar on the 4<sup>th</sup> of October 1861, and officially surveyed in July 1898.

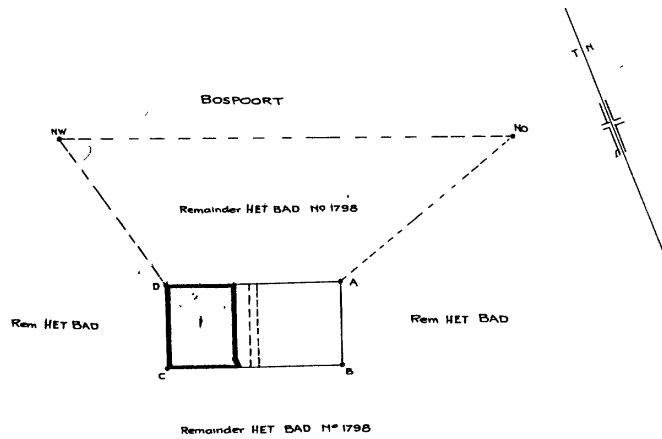
For Portion 25 the map dates to 1952 (CSG Document A150). The portion was surveyed and the map compiled in June 1951.

SG. No. A.7405/03 Form B

SIDES		ANGLES		(Y) CO-ORDINATES (X)	
AB	25.000	A	90 00 00		
BC	50.333	B	90 00 00		
CD	25.000	C	90 00 00		
DA	50.333	D	90 00 00		
CONNECTION					
NW	54.58	NW	46 43 40	NW	+ 566 18 + 322 41
NE	57.79	NE	53 39 40	NE	+ 355 81 - 506 37
SE	50.33	SE	140 43 40	SE	- 16 25 - 50 35
SW	67.46	SW	116 53 00	SW	- 16 25 - 0 00

Compiled in the Surveyor General's Office from the diagrams of two Lots surveyed by Surveyor S de Kock in July 1898 for the purpose of lease to Messrs C.S. Register, J.F. Grobler & F.A. Elloff.

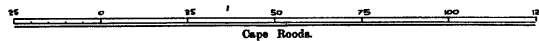
*M. J. J. J.*  
Surveyor General.



For the Division  
of the  
Estate  
See the

*This Diagram represents Lot No. 191  
in the Township of Warm Baths*

Tans geregtreer onder :  
Now registered under :  
No. 465  
REGISTRASIE AFDELING KR  
REGISTRATION DIVISION KR



The above Diagram lettered ABCD represents 2 Morgen 58.33 Square Rods of land, being Portion 1 of the Farm HET BAD N° 1798 332 109

Situate in the District of Waterberg Warmbaths Ward Nylstroom Transvaal Colony.

The whole Farm was originally granted to C J Minnaar by Deed of Grant No. 100 dated the 4<sup>th</sup> day of October 1861 and was surveyed in July 1898 by Surveyor Servaas de Kock

The Beacons were pointed out by the Surveyor S. de Kock and have been properly erected according to Law.

Surveyed in July 1898 by me Servaas de Kock

Prepared for the purpose of Transfer to Messrs. Sutter & van Hees vide Ex-Council Resol. N° 1056 dd. 4 Dec. 1903. Government Land Surveyor.

No. 7028/03 examined. The numerical data of this Diagram are sufficiently consistent. Approved.  
*M. J. J. J.*  
Surveyor-General  
Surveyor-General's Office,  
Pretoria. 12 FEB. 1904

This Diagram belongs to Deed of Transfer No. 100 issued this day in favour of  
Deed Office,  
Pretoria.  
Registrar of Deeds

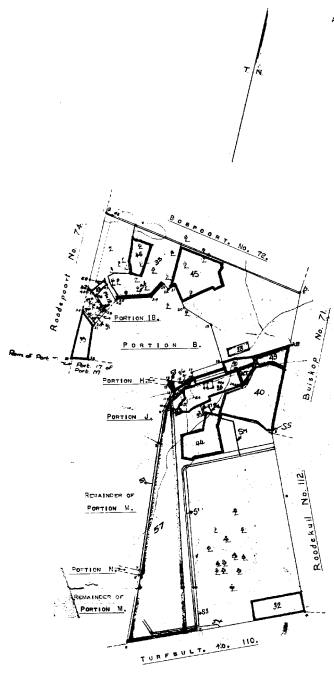
Figure 3: 1903 map of Portion 1 of Het Bad 465KR ([www.csg.dla.gov.za](http://www.csg.dla.gov.za)).

THE STATE OF MICHIGAN  
 DEPARTMENT OF LAND SURVEY  
 DIVISION OF LAND SURVEY  
 REGISTERED PROFESSIONAL SURVEYOR  
 No. 150 / 58

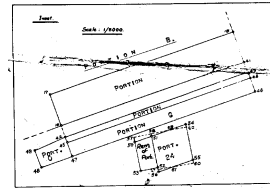
S.G. OFFICE COPY

S.G. No. A 150 / 58

Handwritten notes and signatures, including a large signature 'C. H. ...' and various initials and dates.



SECTION	ACRES	ADJACENT PARTIES
1-2	1035.2	80,83,82
3-4	7061.8	101,13,50
5-6	3055.4	201,20,10
7-8	8874.4	4 89,51,50
9-10	3468.1	5 70,46,50
11-12	2247.7	6 140,20,25
13-14	6246.4	7 179,39,40
15-16	1654.1	8 179,39,40
17-18	2347.7	9 175,37,20
19-20	379.8	10 171,30,20
21-22	432.0	11 169,55,50
23-24	395.5	12 164,33,40
25-26	278.8	13 133,21,40
27-28	600.3	14 89,47,30
29-30	732.8	15 207,24,20
31-32	269.0	16 270,20,20
33-34	188.7	17 90,00,00
35-36	188.2	18 90,00,00
37-38	188.2	19 90,00,00
39-40	154.7	20 222,25,40
41-42	116.4	21 148,00,00
43-44	360.0	22 113,00,00
45-46	888.7	23 270,20,20
47-48	702.7	24 102,10,00
49-50	90.1	25 222,25,40
51-52	701.6	26 179,39,40
53-54	308.1	27 294,05,00
55-56	769.2	28 152,59,20
57-58	100.7	29 183,15,10
59-60	1070.0	31 209,34,50
61-62	888.2	32 34,93,00
63-64	2426.0	33 77,52,20
65-66	407.8	34 58,25,40
67-68	271.3	35 179,58,10
69-70	728.5	36 207,20,20
71-72	25.6	37 850,85,00
73-74	1164.0	38 180,00,00
75-76	1164.0	39 207,20,20
77-78	4089.0	40 44,20,20



**DESCRIPTION OF SECTIONS**  
 33, 30, 5, 8, 9, 10, 11, 12, 35, 37, 40, 42, 14 : Iron peg and chain.  
 47, 47, 43 : Rail section post.  
 13 : Iron post in concrete.  
 20, 26, 27, 28, 29 : 7/8" x 3" iron bars.  
 34 : Wooden pole.  
 35 : 3" iron pipe fence post.  
 36 : 2" square iron fence post.  
 70 : Iron barbed.  
 46 : Rail section.  
 50, 51, 29, 32, 34, 35, 36 : 3/4" x 1" iron peg and chain.

Scale : 1/32000

THE FIGURE 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.

Figure 4: 1952 map of Portion 25 of Het Bad 465KR ([www.csg.dla.gov.za](http://www.csg.dla.gov.za)).

**No historical sites and features were identified and recorded in the study & proposed development area during the June 2023 field assessment.**

### **Results of the June 2023 Field Assessment**

No sites, features or material of archaeological and/or historical origin or significance were identified in the study and proposed Bela-Bela Commercial Park development area. The area has been nearly completely altered from its original natural and historical landscape through recent historical agricultural activities, as well as the development of the existing Airfield, Waste Water Treatment Works and Landfill Site. As a result, if any sites and features were located here in the past it would more than likely have been extensively disturbed or destroyed by these activities.

Although it is deemed highly unlikely that any significant cultural heritage sites, features and material would be encountered in the study and proposed development area, it needs to be noted that dense vegetation cover in some sections could have resulted in such resources being missed (including unmarked and/or low stone-packed graves and burials). This aspect needs to be kept in mind, and it is therefore recommended that a Chance Finds Protocol be drafted and implemented as part of the proposed development. Should any previously unknown sites, features and material then be exposed during any development actions, then a Heritage Specialist can be consulted to investigate and provide recommendations on the way forward.



**Figure 5: Closer view of the study and proposed development area footprint in 2010. Note the existing Airfield, agricultural fields, WWT works and existing Cemetery in the north-east corner (Google Earth 2023).**





**Figure 6: The area in 2016. Note the expansion of the cemetery, as well as the landfill site just south of it (Google Earth 2023).**



**Figure 7: The area in 2023. The extensive impacts of the airfield, agricultural activities, landfill, WWT works and other business-related developments are evident (Google Earth 2023).**





**Figure 8: A view of a section of the study and development area. Note the fairly dense vegetation, as well as the Eskom Powerlines and servitudes.**



**Figure 9: Another section with very dense grass cover.**



**Figure 10: The road towards the existing Airfield with the associated infrastructure there.**



**Figure 11: Another section with very dense vegetation cover.**





**Figure 12: View of some of the agricultural fields in part of the area.**



**Figure 13: A view of the existing sewer ponds (Waste Water Treatment Works).**



**Figure 14: Another section of the area close to the Waste Water Treatment Works & Landfill site.**



**Figure 15: Another general view of part of the area showing the fairly flat nature of it, as well as the dense vegetation.**



## Impact Assessment and Mitigation Measures

*The significance of impacts is determined using the following criteria:*

**Probability:** describes the likelihood of the impact actually occurring

- **Improbable:** the possibility of the impact occurring is very low, due to the circumstances, design or experience.
- **Probable:** there is a probability that the impact will occur to the extent that provision must be made therefore.
- **Highly probable:** it is most likely that the impact will occur at some stage of the development.
- **Definite:** the impact will take place regardless of any prevention plans and there can only be relied on mitigation measures or contingency plans to contain the effect.

**Duration:** the lifetime of the impact

- **Short Term:** the impact will either disappear with mitigation or will be mitigated through natural processes in a time span shorter than any of the phases.
- **Medium Term:** the impact will last up to the end of the phases, where after it will be negated.
- **Long Term:** the impact will last for the entire operational phase of the project but will be mitigated by direct human action or by natural processes thereafter.
- **Permanent:** the impact is non-transitory. Mitigation either by man or natural processes will not occur in such a way or in such a time span that the impact can be considered transient.

**Scale:** the physical and spatial size of the impact

- **Local:** the impacted area extends only as far as the activity, e.g. footprint
- **Site:** the impact could affect the whole or measurable portion of the abovementioned property.
- **Regional:** the impact could affect the area including the neighboring residential areas.

**Magnitude/Severity:** Does the impact destroy the environment, or alter its function

- **Low:** the impact alters the affected environment in such a way that natural processes are not affected.
- **Medium:** the affected environment is altered, but functions and processes continue in a modified way.
- **High:** function or process of the affected environment is disturbed to the extent where it temporarily or permanently ceases.

**Significance:** This is an indication of the importance of the impact in terms of both physical extent and time scale, and therefore indicates the level of mitigation required.

- **Negligible:** the impact is non-existent or unsubstantial and is of no or little importance to any stakeholder and can be ignored.
- **Low:** the impact is limited in extent, has low to medium intensity; whatever its probability of occurrence is, the impact will not have a material effect on the decision and is likely to require management intervention with increased costs.
- **Moderate:** the impact is of importance to one or more stakeholders, and its intensity will be medium or high; therefore, the impact may materially affect the decision, and management intervention will be required.
- **High:** The impact could render development options controversial or the project unacceptable if it cannot be reduced to acceptable levels; and/or the cost of management intervention will be a significant factor in mitigation.

The significance is calculated by combining the criteria in the following formula:

Sum (Duration, Scale, Magnitude) x Probability

S = Significance weighting; Sc = Scale; D = Duration; M = Magnitude; P = Probability

With no sites, features and material of cultural heritage origin and significance found in the area during the assessment, the current site layout/footprint will not impact negatively on any known sites. The impact of the proposed development on recorded and known heritage sites is therefore deemed as Negligible.

Aspect	Description	Weight
<b>Probability</b>	<b>Improbable</b>	<b>1</b>
	Probable	2
	Highly Probable	4
	Definite	5
<b>Duration</b>	<b>Short Term</b>	<b>1</b>
	Medium Term	3
	Long Term	4
	Permanent	5
<b>Scale</b>	<b>Local</b>	<b>1</b>
	Site	2
	Regional	3
<b>Magnitude/Severity</b>	<b>Low</b>	<b>2</b>
	Medium	6
	High	8
<b>Significance</b>	<b>Sum (Duration, Scale, Magnitude)</b>	<b>x Probability</b>

	<b>Negligible</b>	<b>≤20</b>
	Low	>20≤40
	Moderate	>40≤60
	High	>60

**Results: 1+1+2×1 = 4 i.e., ≤20**

The impact of the proposed development on recorded and known cultural heritage sites in the area is therefore deemed as Negligible based on the Impact Assessment criteria used. However, there is always a possibility of sites, features and material being missed as a result of various factors such as vegetation cover hampering visibility on the ground, as well as the often-subterranean nature of cultural heritage resources (including low stone-packed or unmarked graves). These factors need to be taken into consideration and it is therefore recommended that a Chance Finds Protocol be drafted and implemented for the proposed Bela-Bela Commercial Park Development.

## **7. CONCLUSIONS AND RECOMMENDATIONS**

APelser Archaeological Consulting cc (APAC cc) was appointed by Mang Geoenviro Services, on behalf of the Bela-Bela Local Municipality, to conduct a Phase 1 Heritage Impact Assessment for the proposed Bela-Bela Commercial Park Development. The study and development area are located in Bela-Bela in the Limpopo Province. The proposed development is situated on the Remainder of Portion 25 of the original farm Het Bad 465KR.

The literature review indicates that there are some cultural heritage (archaeological & historical) sites and features in the larger geographical area within which the study area falls. No sites, features, or material of cultural heritage (archaeological and/or historical) origin were identified and recorded in the study and the proposed development area during the June 2023 field assessment.

The impact of the proposed development on recorded and known cultural heritage sites in the area is therefore deemed as Negligible based on the Impact Assessment criteria used. However, there is always a possibility of sites, features and material being missed as a result of various factors such as vegetation cover hampering visibility on the ground, as well as the often-subterranean nature of cultural heritage resources (including low stone-packed or unmarked graves). These factors need to be taken into consideration and it is therefore recommended that a Chance Finds Protocol be drafted and implemented for the proposed Bela-Bela Commercial Park Development.

**From a Cultural Heritage point of view, it can be concluded that the proposed Bela-Bela Commercial Park Development should be allowed to taking into consideration the recommended Chance Find Protocol provided above.**

***The often subterranean nature of cultural heritage resources (including low stone-packed or unmarked graves) should also be taken into consideration. Should any previously unknown or buried sites, features or material be uncovered during any development***



***actions then an Archaeological expert should be contacted to investigate and provide recommendations on the way forward.***

## **8. REFERENCES**

General and Closer views of study & proposed Bela-Bela Commercial Park development: Google Earth 2023.

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## **APPENDIX A: DEFINITION OF TERMS:**

**Site:** A large place with extensive structures and related cultural objects. It can also be a large assemblage of cultural artifacts, found on a single location.

**Structure:** A permanent building found in isolation or which forms a site in conjunction with other structures.

**Feature:** A coincidental find of movable cultural objects.

**Object:** Artifact (cultural object).

(Also see Knudson 1978: 20).

## **APPENDIX B: DEFINITION/ STATEMENT OF HERITAGE SIGNIFICANCE**

**Historic value:** Important in the community or pattern of history or has an association with the life or work of a person, group or organization of importance in history.

**Aesthetic value:** Important in exhibiting particular aesthetic characteristics valued by a community or cultural group.

**Scientific value:** Potential to yield information that will contribute to an understanding of natural or cultural history or is important in demonstrating a high degree of creative or technical achievement of a particular period

**Social value:** Have a strong or special association with a particular community or cultural group for social, cultural or spiritual reasons.

**Rarity:** Does it possess uncommon, rare or endangered aspects of natural or cultural heritage.

**Representivity:** Important in demonstrating the principal characteristics of a particular class of natural or cultural places or object or a range of landscapes or environments characteristic of its class or of human activities (including way of life, philosophy, custom, process, land-use, function, design or technique) in the environment of the nation, province region or locality.

## **APPENDIX C: SIGNIFICANCE AND FIELD RATING:**

### **Cultural significance:**

- Low: A cultural object being found out of context, not being part of a site or without any related feature/structure in its surroundings.
- Medium: Any site, structure or feature being regarded less important due to a number of factors, such as date and frequency. Also any important object found out of context.
- High: Any site, structure or feature regarded as important because of its age or uniqueness. Graves are always categorized as of a high importance. Also any important object found within a specific context.

### **Heritage significance:**

- Grade I: Heritage resources with exceptional qualities to the extent that they are of national significance
- Grade II: Heritage resources with qualities giving it provincial or regional importance although it may form part of the national estate
- Grade III: Other heritage resources of local importance and therefore worthy of conservation

### **Field ratings:**

- i. National Grade I significance: should be managed as part of the national estate
- ii. Provincial Grade II significance: should be managed as part of the provincial estate
- iii. Local Grade IIIA: should be included in the heritage register and not be mitigated (high significance)
- iv. Local Grade IIIB: should be included in the heritage register and may be mitigated (high/medium significance)
- v. General protection A (IV A): site should be mitigated before destruction (high/medium significance)
- vi. General protection B (IV B): site should be recorded before destruction (medium significance)
- vii. General protection C (IV C): phase 1 is seen as sufficient recording and it may be demolished (low significance)

## **APPENDIX D: PROTECTION OF HERITAGE RESOURCES:**

### **Formal protection:**

National heritage sites and Provincial heritage sites – Grade I and II

Protected areas - An area surrounding a heritage site

Provisional protection – For a maximum period of two years

Heritage registers – Listing Grades II and III

Heritage areas – Areas with more than one heritage site included

Heritage objects – e.g. Archaeological, paleontological, meteorites, geological specimens, visual art, military, numismatic, books, etc.

### **General protection:**

Objects protected by the laws of foreign states

Structures – Older than 60 years

Archaeology, paleontology and meteorites

Burial grounds and graves

Public monuments and memorials

## **APPENDIX E: HERITAGE IMPACT ASSESSMENT PHASES**

1. Pre-assessment or Scoping Phase – Establishment of the scope of the project and terms of reference.
2. Baseline Assessment – Establishment of a broad framework of the potential heritage of an area.
3. Phase I Impact Assessment – Identifying sites, assess their significance, make comments on the impact of the development and makes recommendations for mitigation or conservation.
4. Letter of recommendation for exemption – If there is no likelihood that any sites will be impacted.
5. Phase II Mitigation or Rescue – Planning for the protection of significant sites or sampling through excavation or collection (after receiving a permit) of sites that may be lost.
6. Phase III Management Plan – For rare cases where sites are so important that development cannot be allowed.