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**A PHASE 1 HERITAGE IMPACT ASSESSMENT & REPORT FOR THE
PROPOSED SOLAR & WASTE WATER TREATMENT WORKS DEVELOPMENT
ON PORTIONS OF PORTION 15 OF THE FARM TWEEFONTEIN 360KT
NEAR STEELPOORT IN THE LIMPOPO PROVINCE**

For:

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REPORT: **APAC022/98**

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October 2022

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SUMMARY

APelser Archaeological Consulting (APAC) was appointed by Eco 8 Environmental Planners to conduct a Phase 1 Heritage Impact Assessment for the proposed Utilities & Services Infrastructure Development (Solar PV Facility, Waste Water Treatment Works & future Industrial Township) on Portions A, C & the Remainder of Portion 15 of the farm Tweefontein 360KT, near Steelpoort in the Limpopo Province.

Background research indicates that there are some cultural heritage (archaeological & historical) sites and features in the larger geographical area within which the study area falls, while a number of sites and features of archaeological origin & significance were identified and recorded in the study area and proposed development boundaries during the October 2022 field assessment. This report discusses the results of both the background research and physical assessment and provides recommendations on the way forward at the end.

From a Cultural Heritage point of view it can be concluded that the proposed Utilities & Services Infrastructure Development in the study & development footprint area can be allowed to continue, once the recommendations on required mitigation measures put forward at the end of the report has been implemented.

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1. INTRODUCTION

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Background research indicates that there are some cultural heritage (archaeological & historical) sites and features in the larger geographical area within which the study area falls, while a number of sites and features of archaeological origin & significance were identified and recorded in the study area and proposed development boundaries during the October 2022 field assessment.

The client indicated the location and boundaries of the study area and the assessment focused on this portion.

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 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).

3.1. The National Heritage Resources Act

According to the Act 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.)**

A Heritage Impact Assessment (HIA) is the process to be followed in order 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. 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 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

Structures

Section 34(1) of the Act state 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 means 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.

Alter means any action affecting 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:

- a. 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;
- b. 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
- c. 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

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.

4. METHODOLOGY

4.1. Survey of literature

A survey 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.

4.2. Field survey

The field assessment section of the study was conducted 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.

4.3. Oral histories

People from local communities are sometimes interviewed in order to obtain information relating to the surveyed area. It needs to be stated that this is not applicable under all circumstances. When applicable, the information is included in the text and referred to in the bibliography.

4.4. 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. DESCRIPTION OF THE AREA

The study & proposed development area (Solar PV Facility, Waste Water Treatment Works & future Industrial Township) is located on Portions A, C & the Remainder of Portion 15 of the farm Tweefontein 360KT, near Steelpoort in the Limpopo Province. The proposed Solar development will be on Portion A, WWTW on Portion C & the future Industrial Township on the Remainder.

The topography of the study & proposed development area is for the most part relatively flat and open, although some prominent hills and mountainous areas are located in the larger region and bordering the specific study portion. During the field assessment the vegetation (tree/shrubs/bush and grass cover) was very dense in some sections, hampering visibility on the ground. Some sections were more open and cleared, with large erosion dongas located in the parts of the area as well. The area would have been utilized in the past for agricultural purposes (mostly livestock grazing/keeping), with the larger area around the proposed development site heavily impacted by past and ongoing mining activities (e.g. Sylvania Tweefontein). A number of dirt tracks/access roads had impacted on the area as well.



Figure 1: General location of the study & proposed development area (Google Earth 2022).



Figure 2: Closer view of study area & proposed development footprint (Google Earth 2022).



Figure 4: General view of part of the area showing the impact of mining in the larger area. Note the mountains surrounding the area, as well as the relatively flat & open nature of the study area.



Figure 5: Visibility was good in some sections, with recent burning evident.



Figure 6: Various dirt roads & tracks traverse the area and have had some impact on the original natural & historical landscape.



Figure 7: Powerlines and servitudes have also impacted on the area.



Figure 8: One of the large erosion dongas located in the study & proposed development area.



Figure 9: Some sections contained dense vegetation cover that limited visibility on the ground.

6. DISCUSSION

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 in 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).

Some Stone Age sites and artifacts are known to exist in the larger geographical area, and were identified and studied by the author during previous assessments and archaeological mitigation at the Sylvania Lannex & Tweefontein Sections (Pelser et.al 2010; 2020). These sites are open-air surface sites located in and around erosion dongas.

Stone Age material was identified in the area during the October 2022 assessment, located in and around an erosion donga located here.

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 (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.

Early Iron Age sites are known to exist in the larger Steelpoort Valley area (Pistorius 2006), while Later Iron Age stone-walled sites are also known and have been archaeologically studied in the larger geographical area in the past (Van Schalkwyk 2013; Pelser 2013). The origins of the first Bantu-Negroid farming communities who practiced agriculture, live-stock herding and metal working can be traced to the Steelpoort Valley. These Early Iron Age farming communities, whose settlements have been recorded on amongst others Hendriksplaats 281 and Derde Gelid 278, were related to Early Iron Age communities who, contemporaneously, from AD500 to AD900, settled further towards the east in the Lydenburg Valley. One of the settlements belonging to the Early Iron Age Lydenburg culture

won international acclaim as the so-called Lydenburg Heads (clay masks) were discovered at this site near the Sterkspruit, south of Lydenburg (Pistorius 2013: 18).

Some sites and material were identified in the general area during a recent assessment, dating to the (Early) Iron Age, and is similar to sites recorded by the author in the Sylvania Tweefontein Section in 2020 (Pelser 2020: 14-15). Some low stone walling was recorded in the area during the recent October assessment, with pottery and grinding stones found in association. Only one of the sites falls inside the study & development area footprint however.

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 travel close to this area were the group of Scoon in 1836 (Bergh 1999: 13).

The historical period in the Steelpoort Valley is associated with the second millennium AD when a predominantly Northern Sotho-speaking population occupied the Steelpoort. These people are part of a larger Northern Sotho-speaking community who occupy a vast area between the Limpopo River in the north, the Drakensberg in the east and the Sekhukhune Mountains in the west. Numerous divisions and groups or clans occupied this vast region. The history of the people of this area can be divided into several periods:

The earliest period of settlement is characterized by small groups of Bantu speaking people who started to drive the San and Khoi from the area and who are difficult to identify. From approximately AD1700 ancestral groupings of the present inhabitants of the land began to arrive in the area. Groups that can be distinguished include:

1. A large group of Sotho who came from the north-eastern parts of the Lowveld and who settled on the plateau to the north and to the south of the Strydpoortberge.
2. Small groups of Kgatla and Huruthshe-Kwena origin moved from the Tswana area (Brits and Rustenburg) into the territory. Amongst them were the present Pedi (or Rota) who moved into what is now Sekhukhuneland, where they subjected the Sotho already living there.
3. During these times Sekhukhuneland was also penetrated by Sotho arriving from the south-east.
4. After AD1600 the Northern Ndebele arrived from the south-east and settled in what is now the Mokerong district (Pistorius 2013: 19).

It is assumed that during the period from AD1700 to AD1826 the Pedi took political control over the territory previously known as Lebowa, but to the south of the Strydpoortberge. The Pedi chiefdom reached its zenith during the reign of Thulare who died in 1824. During the disruption of the difaqane (AD1822 to AD1828) Mzilikazi attacked the Pedi from the south-east in 1826 and in 1827/1828. This caused large-scale depopulation of the southern part of the Northern-Sotho territory. The Pedi sought refuge in the Soutpansberg in 1822 and only

returned in 1828. After the wars with Mzilikazi there were wars with the Swazi. The Voortrekkers arrived in the Steelpoort area in the late 1840"s. Several armed struggles between the Voortrekkers and the Pedi ensued (Pistorius 2013: 19-20).

After the British annexed the Transvaal (AD1877 to AD1881) the Pedi was subjugated by the British who were supported by the Swazi during the war of Sekhukhune in 1879. In 1842 Andries Hendrik Potgieter wished to move from the British sphere of influence and to establish trade relations with Delagoa Bay. He moved with his followers from Potchefstroom to the Eastern Transvaal and founded Andries Ohrigstad (named after himself and Gergios Gerhardus Ohrig, a merchant from Amsterdam who was well disposed towards the Voortrekkers). The name was later abbreviated to Ohrigstad. The town also served as the seat of the Volksraad. During 1848 to 1849 Ohrigstad was abandoned when many people died of malaria. The town of Lydenburg was founded further to the south near the confluence of the Sterkspruit and the Spekboom River. This area was located on higher ground and was therefore healthier than Ohrigstad. The railway line between Steelpoort and Lydenburg was constructed in 1924 due to an increase in the mining of chrome and magnetite. The name Steelpoort is derived from a hunting expedition that took place either in the late 19th century or the early 20th century. When a group of Voortrekkers from Natal under Frans Joubert had settled there, a man called Scholtz shot an elephant at dusk and on returning next morning found that the tusks had been removed. When the wagons were searched, the tusks were found in the possession of a man called Botha, after which the farm Bothashoek was named. Because an elephant had been killed there, the Poort was named Olifantspoort. The river flowing through the Poort was called Steelpoort River [„steel“ meaning steal] (Pistorius 2013: 20).

The Pedi were governed by Thulware until his death in 1824. His main village was Monganeng on the banks of the Tubatse River. His son, Sekwati, fled to the Soutpansberg in the north during the raids of Mzilikazi in 1822. He returned in 1828 and occupied the mountain fortress Phiring, his capital from where he united the Pedi. The Pedi initially maintained good relations with the Voortrekkers who arrived in Ohrigstad from 1845. However, after a clash with Andries Hendrik Potgieter in 1852 Sekwati moved his capital to Thaba Mosego. Border disputes with the Zuid-Afrikaansche Republiek (ZAR) were settled in 1857 with an accord that stated that the Steelpoort River served as the border between Pedi land and the Lydenburg Republic. Sekwati gave the Berlin Missionary Society permission to establish the Maandagshoek missionary station in Pedi territory. After Sekwati"s death in 1861, his son Sekhukhune succeeded his father and also established his village at Thaba Mosego. He ordered the Berlin Missionary Society to discontinue their work and the mission station was burn down. Alexander Merensky, one of the missionaries, thereafter established the well-known Botšabelo missionary station at Middelburg (Pistorius 2013: 21).

The good relationship between the ZAR and the Pedi was gradually weakened. The period from 1876 to 1879 was one of conflict and war, first with the ZAR and then with the British who annexed the Transvaal in 1877. During the First Sekhukhune War in August 1876, the Voortrekkers attacked Thaba Mosego and partly destroyed the settlement. The Second Sekhukhune War followed in November 1879 during which Sekhukhune was captured in the

Mamatamageng cave and sent to prison in Pretoria. Two divisions attacked the Pedi. The main division, comprised of 3 000 whites and 2 500 black allies, attacked from the north-east. The Lydenburg division consist of 5 000 to 8 000 Swazi Impi, 400 other black allies and 400 white soldiers who attacked from Burgersfort in the south. The Second Sekhukhune War is associated with the settlements of Thaba Mosego and Tšate, a new village established by Sekhukhune close to Thaba Mosego (Pistorius 2013: 21-22).

No sites, features or material with a recent historical origin were identified in the area during the recent field assessment.

Results of the October 2022 Field Assessment

A number of sites were identified and recorded during an earlier assessment in the general area. Most of these were represented by scatters of pottery of varying density and extent, and included both undecorated and decorated pieces. The decorations indicated that the sites date to the Early/Middle Iron Age and most likely to between AD750 & AD1200. Another aspect that placed these artifacts and sites most likely into the Early/Middle Iron Age is the fact that they were not found in association with stone walling – a characteristic of the Later Iron Age settlements.

During the October 2022 assessment, a number of sites were identified and recorded in the area. Some of these are located outside of the study & proposed development area footprint however, and will not be impacted. These sites are represented by remnants of stone walling (low foundations mostly) that could represent Late Iron Age/historical settlement remains, with some pottery fragments and upper grinding stones found in association.

One site with remnants of similar stone walling was found in the study & development area footprint. The stonewalling likely represents the remains of various homesteads. A lower grinding stone was found close by to one of these. It is possible that this site is related to or linked to the other ones found outside of the study area. Although the cultural heritage significance of the site is not deemed very high based on the fact that the walling is very ephemeral and not well preserved, it covers a fairly large area. Sites like this (probably dating to the Late Iron Age) in the area is also not very common, and based on this it is fairly significant. It will therefore be recommended that some mitigation measures are implemented before the proposed development work commences.

GPS Location of Site: S24 52 12.80 E30 07 45.90 (1).

Cultural Significance: Medium - High

Heritage Significance: Grade III: Other Heritage resources of local importance and therefore worthy of conservation.

Field Ratings: General Protection A (IV A): Site should be mitigated before destruction (High/Medium Significance)

Mitigation: Detailed mapping & drawing of site. Limited Archaeological Excavations.

One site containing a small scatter of Middle/Later Stone Age (MSA/LSA) material was also recorded in one of the large erosion dongas found in the area. The density of material found scattered on the surface of the site is low. It is possible that similar scatters could be present in the area, and especially in the erosion dongas. This specific site and donga is located in the Portion A section of the study area, with the other donga located in the Portion C section. Last mentioned donga was not assessed in October, but it is envisaged that similar finds would be located here.

These erosion dongas will be avoided by the proposed development activities, but will be rehabilitated to halt further erosion as indicated by the client (**Personal Communication: Riaan Visagie 2022-10-04**). Any impacts on cultural heritage resources (archaeological remains in the form of open-air scatters of Stone Age material) are therefore unlikely in these areas. No further mitigation is therefore required

GPS Location of Site: S24 52 26.00 E30 08 34.90 (2).

Cultural Significance: Low

Heritage Significance: Low

Field Ratings: General protection C (IV C): Phase 1 is seen as sufficient recording and it may be demolished (Low significance)

Mitigation: None required



Figure 10: Aerial view showing the location of the sites recorded in October (red pins), as well as other known sites recorded previously (blue pins). The erosion dongas in Portions A & C is also visible (Google Earth 2022).



Figure 11: Low stone walling (foundations) found outside of the study area & development footprint.



Figure 12: Pottery & an upper grinding stone found at this site.



Figure 13: Remnants of a possible homestead (hut) at the site.



Figure 14: MSA/LSA stone tools found in the Portion A erosion donga.



Figure 15: Remnants of stone walling found on Site 1 in the study area.



Figure 16: More stone walling on Site 1.



Figure 17: An upper grinding stone on the site.



Figure 18: A partially buried lower grinding stone close to some stone walling foundations on Site 1.

Based on the desktop research and October 2022 field assessment is clear that there are a number of cultural heritage sites and features present in the larger area, as well as the specific study and development area. Care should be taken to avoid any possible negative impacts on these sites. However, if this is not possible a number of measures can be implemented to mitigate the potential impacts. If these are implemented then there should be no reason why the proposed development should not be allowed to continue.

7. CONCLUSIONS AND RECOMMENDATIONS

APelser Archaeological Consulting (APAC) was appointed by Eco 8 Environmental Planners to conduct a Phase 1 Heritage Impact Assessment for the proposed Utilities & Services Infrastructure Development (Solar PV Facility, Waste Water Treatment Works & future Industrial Township) on Portions A, C & the Remainder of Portion 15 of the farm Tweefontein 360KT, near Steelpoort in the Limpopo Province.

Background research indicates that there are some cultural heritage (archaeological & historical) sites and features in the larger geographical area within which the study area falls. During the October 2022 assessment, a number of sites were identified and recorded in the area. Some of these are located outside of the study & proposed development area footprint however, and will not be impacted. These sites are represented by remnants of stone walling (low foundations mostly) that could represent Late Iron Age/historical settlement remains, with some pottery fragments and upper grinding stones found in association.

One site with remnants of similar stone walling was found in the study & development area footprint. The stonewalling likely represents the remains of various homesteads. A lower grinding stone was found close by to one of these. It is possible that this site is related to or linked to the other ones found outside of the study area. Although the cultural heritage significance of the site is not deemed very high based on the fact that the walling is very ephemeral and not well preserved, it covers a fairly large area. Sites like this (probably dating to the Late Iron Age) in the area is also not very common, and based on this it is fairly significant. If the proposed development actions cannot avoid impacting on the site it is recommended that detailed mapping & drawing of site and limited Archaeological Excavations are conducted in order to recover information and cultural material from the site to assist with interpreting and dating the site.

One site containing a small scatter of Middle/Later Stone Age (MSA/LSA) material was also recorded in one of the large erosion dongas found in the area. The density of material found scattered on the surface of the site is low. It is possible that similar scatters could be present in the area, and especially in the erosion dongas. This specific site and donga is located in the Portion A section of the study area, with the other donga located in the Portion C section. Last mentioned donga was not assessed in October, but it is envisaged that similar finds would be located here. These erosion dongas will be avoided by the proposed development activities, but will be rehabilitated to halt further erosion as indicated by the client. Any impacts on cultural heritage resources are therefore unlikely in these areas and no further mitigation measures is therefore required

It should be noted here that although all efforts are made to locate, identify and record all possible cultural heritage sites and features (including archaeological remains) there is always a possibility that some might have been missed as a result of grass cover and other factors. The subterranean nature of these resources (including low stone-packed or unmarked graves) should also be taken into consideration. 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.

To conclude it can be said that the Phase 1 Heritage Impact Assessment for the proposed developments on various portions of Portion 15 of Tweefontein 360KT, located near Steelpoort in the Limpopo Province, was conducted successfully. From a Cultural Heritage point of view there should be no objection to the proposed developments should the recommended mitigation measures be implemented

8. REFERENCES

General and Closer views of study area location & Sites recorded: Google Earth 2022.

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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, palaeontological, 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, palaeontology 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.