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**A PHASE 1 HERITAGE IMPACT ASSESSMENT & REPORT FOR THE
PROPOSED K54/M31 ROAD CONSTRUCTION & UPGRADE PROJECT
ON VARIOUS PORTIONS OF RIETFONTEIN 375 JR, RIETVALLEI 377 JR,
GARSTFONTEIN 374 JR, DOORNKLOOF 391 JR AND
THE REMAINDER OF PORTION 499 OF ZWAVELPOORT 373 JR.
TSHWANE METROPOLITAN AREA, GAUTENG**

For:

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REPORT: **APAC020/89**

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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

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SUMMARY

APelser Archaeological Consulting (APAC) was appointed by Bokamoso Landscape Architects & Environmental Consultants CC to conduct a Phase 1 Heritage Impact Assessment for the proposed K54/M31 Road Upgrade & Construction Project. The study area is located in the Tshwane Metropolitan Municipality of Gauteng and on various Portions of Rietfontein 375 JR, Rietvallei 377 JR, Garstfontein 374 JR, Doornkloof 391 JR and the Remainder of Portion 499 of Zwavelpoort 373 JR.

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. The assessment of the specific study area did not identify any sites, features or material of cultural heritage (archaeological and/or historical) origin or significance in the direct area of impact, although one site was identified in the general area. This report discusses the results of both the background research and physical assessment and provides recommendations on the way forward at the end.

From Cultural Heritage perspective it is recommended that the proposed K54/31 Road Upgrade & Construction Project be allowed to continue, taking into consideration the recommendations put forward at the end of the report.

CONTENTS

1. INTRODUCTION	5
2. TERMS OF REFERENCE	5
3. LEGISLATIVE REQUIREMENTS	5
4. METHODOLOGY	9
5. DESCRIPTION OF THE AREA	9
7. CONCLUSIONS AND RECOMMENDATIONS	22
8. REFERENCES	24
APPENDIX A: DEFINITION OF TERMS:.....	26
APPENDIX B: DEFINITION/ STATEMENT OF HERITAGE SIGNIFICANCE.....	27
APPENDIX C: SIGNIFICANCE AND FIELD RATING:	28
APPENDIX D: PROTECTION OF HERITAGE RESOURCES:.....	29
APPENDIX E: HERITAGE IMPACT ASSESSMENT PHASES.....	30

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. The assessment of the specific study area did not identify any sites, features or material of cultural heritage (archaeological and/or historical) origin or significance in the direct area of impact, although one site was identified in the general area.

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

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

A Heritage Impact Assessment (HIA) is the process to be followed 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) states that no person may demolish any structure or part thereof which 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 palaeontological site or any meteorite;
- b. destroy, damage, excavate, remove from its original position, collect or own any archaeological or palaeontological 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 palaeontological material or object, or any meteorite; or
- d. bring onto or use at an archaeological or palaeontological site any excavation equipment or any equipment that assists in the detection or recovery of metals or archaeological and palaeontological 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

Central Plaza Investments 28 (Pty) Ltd will be undertaking the construction of the proposed K147 Road upgrade on behalf of the Gauteng Department of Roads and Transport (GDRT). Bokamoso Landscape Architects & Environmental Consultants CC is undertaking the Basic Assessment Process for this development, of which the HIA forms part.

The proposed M31/K54 (Nellmapius Drive) construction and upgrade covering a distance of approximately 11km will entail the upgrade of the M31/K54 (Nellmapius Drive) from the R21 freeway up to the R50 (Delmas Road), and the construction of the planned provincial route M31/K54 from the R50 (Delmas Road) eastwards crossing the M30 (Garsfontein Road) up to the M11 (Atterbury Road), consisting of one lane per direction. Intersections along the abovementioned route will also be upgraded. The proposed road construction and upgrade will occur on various Portions of Rietfontein 375 JR, Rietvallei 377 JR, Garstfontein 374 JR, Doornkloof 391 JR and the Remainder of Portion 499 of Zwavelpoort 373 JR.

The proposed road construction and upgrade will occur in the east of Tshwane from the R21/M31 Intersection near the Rietvlei Nature Reserve in the south-west, though Mooikloof up to the M11 (Atterbury Road) in the north-east.

The proposed K54/M31 Road Upgrade and Construction Project area is located in areas that have already been developed and nearly completely altered from its original natural landscape. It traverses and skirts urban settlement areas (housing estates, as well as more informal townships), with sections of it following existing roads and road servitudes in between urban settlement areas. A part of the study area is situated close to Rietvlei Nature Reserve. The topography of the study area is for the most part flat and open, although some rocky outcrops and ridges occur in small sections. Other impacts include Powerlines, while the dumping of building rubble and other household refuse occurs throughout the area as well.

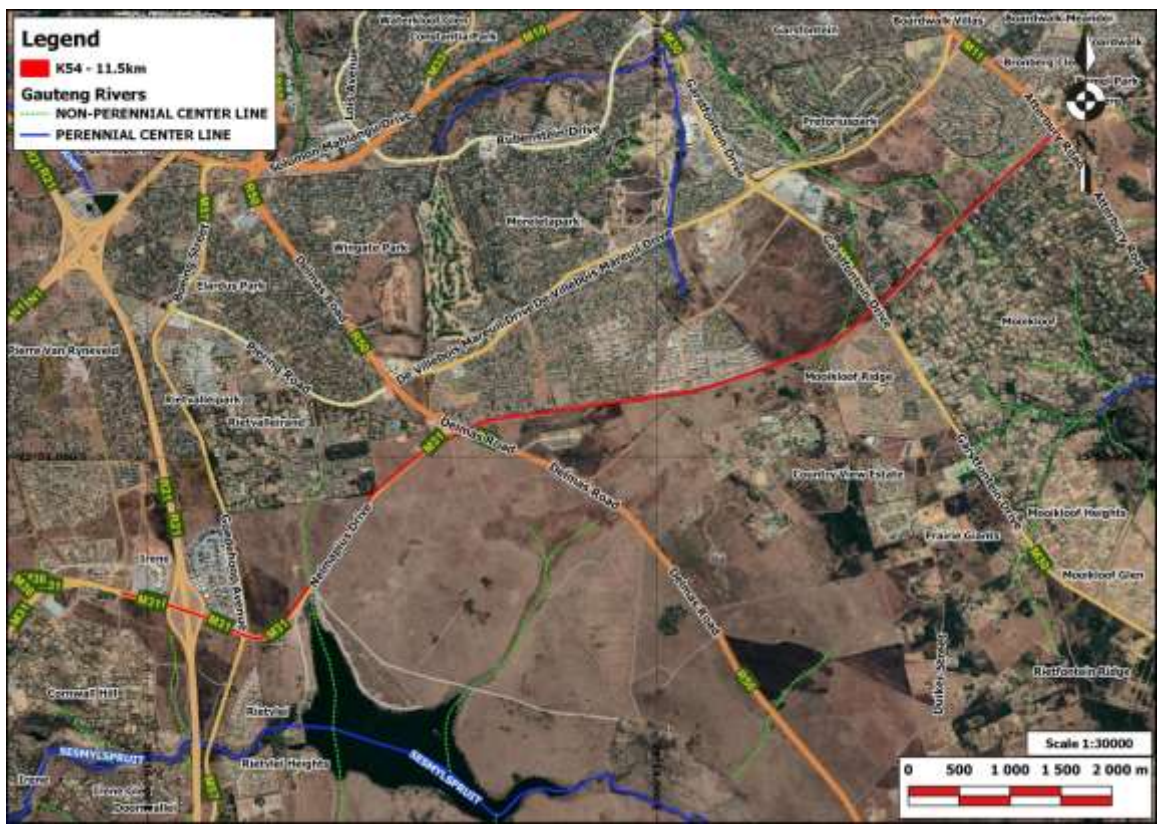


Figure 1: General location of the study area and Road alignment (Google Earth 2020).

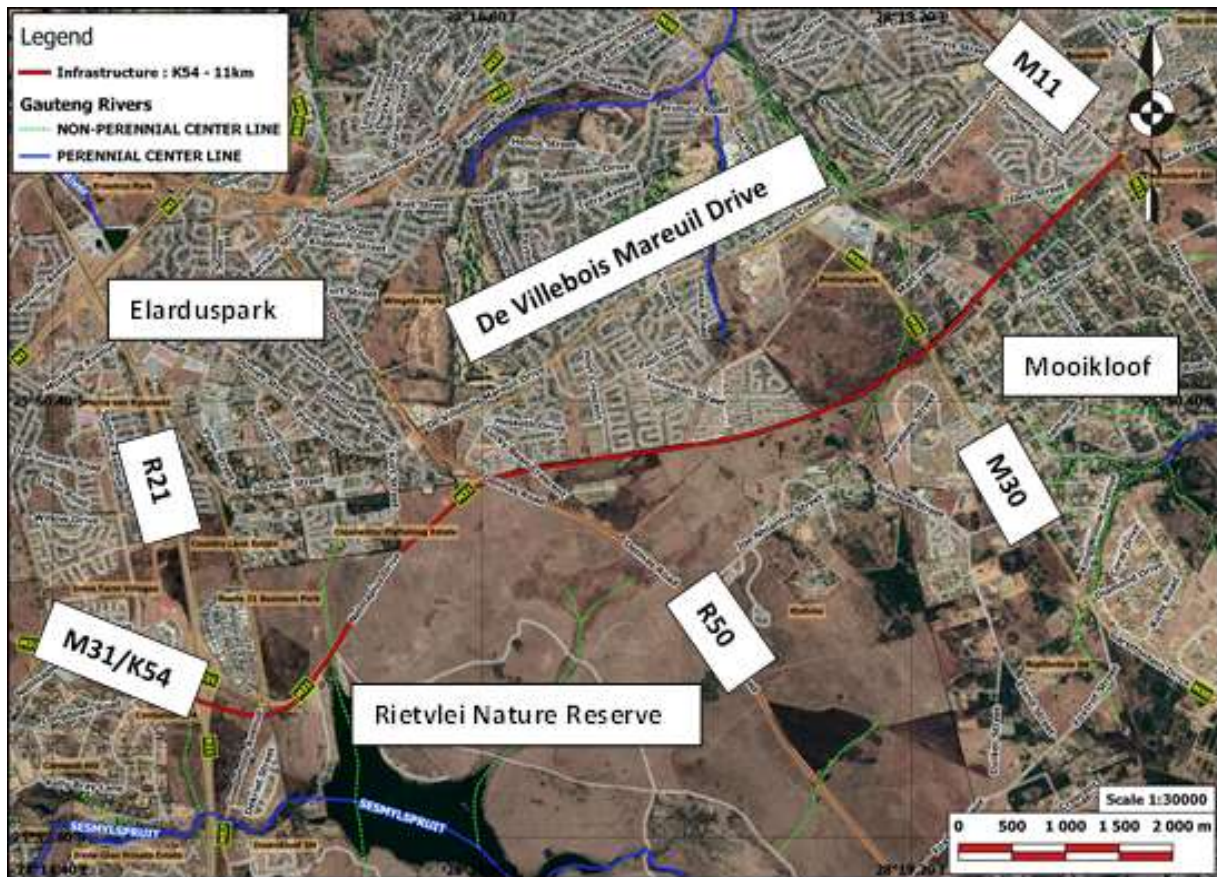


Figure 2: Location Map (courtesy Bokamoso Landscape Architects and Environmental Consultants CC).

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).

No known Stone Age sites or artifacts are present in the study area. The closest known Stone Age sites are those of the well-known Early Stone Age site at Wonderboompoort, a Later Stone Age site known as Fort Troje near Cullinan and a number of sites in the Magaliesberg area (Bergh 1999: 4). Stone Age people occupied the larger area since earliest times. Middle Stone Age material has also been identified at Erasmusrand and the Groenkloof Nature Reserve (Van Vollenhoven 2006: 183). At the Erasmusrand cave some

Late Stone Age tools were also identified as well as at Groenkloof (Van Vollenhoven 2006: 184). LSA material was also found at Zwartkops and Hennops River (Bergh 1999: 4). This last phase of the Stone Age is associated with the San people.

No Stone Age sites or objects (such as stone tools) were identified in the area. If any Stone Age artifacts are to be found in the area then it would more than likely be single, out of context, stone tools.

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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.

No Early Iron Age sites are known in the larger geographical area of Pretoria, while Later Iron Age sites do occur in the Pretoria area (Bergh 1999: 7). The closest known LIA sites are at Silver Lakes and near Mamelodi on the farm Hatherley (Van Schalkwyk et.al 1996). These sites are related to the Manala Ndebele (Bergh 1999: 10) who was present in the area at the time when the first Europeans arrived here during the mid-19th century. Late Iron Age sites have been identified close to the Rietvlei Dam Nature Reserve at Groenkloof and Erasmusrand (Van Vollenhoven 2006: 188). According to Delius (1983: 12) and Horn (1996: 23) LIA people moved into the Pretoria area after 1600 A.D.

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. It was during the Matabele's stay along the Apies River that the first white people

entered the area: travelers and hunters such as Cornwallis Harris and Andrew Smith, traders Robert Schoon and Andrew McLuckie, and missionaries James Archbell and Robert Moffat. It is known from oral history the Robert Schoon sent Mzilikazi huge quantities of glass trade beads, rather than the guns that the latter coveted so much.

It is a well-established fact that the stone walled sites on various farms in the larger area around the east of Pretoria and the Bronberge were inhabited mainly by the southern Ndebele. The former were most probably among the earliest Nguni-speaking people in the immediate area north of the Magaliesberg range north of Pretoria. During the rule of a chief named Musi, they split into five separate migrating groups, namely the Manala, Ndzundza, Kekana, Mhwaduba and Sibasa sections (Van Schalkwyk et.al 1996:47-48).

The Manala settled over a wide area towards the east of present-day Pretoria. This is roughly north and north east of the Bronberg range (from Wapadrand in the west towards Tiegervoort and Bapsfontein in the south east), south of the Magaliesberg and Pienaarspoort range (known to the Manala as Ko- or KwaQobongo) and from Mamelodi in the west towards the Cullinan intersection on the N4 in the east.

According to oral traditions this area was geo-politically divided into three regions. It is unclear whether these divisions denoted tribal sub regions, wards or headmanships, whether they were chronologically occupied and deserted, and exactly which rulers or chiefs were linked to these areas. The oral traditions also revealed that since the almost complete destruction of the Manala chiefdom by Mzilikazi in around 1825, remnants of the Manala regrouped in scattered settlements or clusters of settlements up to recent times. Many Manala became labour tenants on European owned farms in the area. As a result of the destruction caused by Mzilikazi, the Manala underwent a three-fold split, which was further aggravated by internal strife.

The pre-colonial threefold regional divisions, consisted of Ezotshaneni, Embilaneni and KoNonduna. According to oral records, KoNonduna was occupied between circa 1747 and 1825 at the time of Mzilikazi's destruction of the Manala. The dates are speculative and based on a complex dating system, which combines the notion of regimentation, generation and duration of rule. In terms of Manala Royal Genealogy, the names of all 33 rulers (amakosi), from around 1642 to the present, are known. Of these, Mdibane (11th ruler and founder of KoNonduna), Matshaba (14th ruler and linked to Hatherley or Emakopana) and Sibindi (18th ruler attacked by Mzilikazi) are the most relevant in terms of the work on Hatherley (Van Schalkwyk et.al 1996:48-49).

The exact geographical boundaries of the KoNonduna sub-region are not known. It might have overlapped with the adjacent Embilaneni. Oral traditions does however provide the names of farms which formed part of this region, namely Klipkop 396 JR, a section of Zwartkoppies 364 JR, Hatherley 331 JR, a section of Mooiplaats 367 JR and Zwavelpoort 373 JR. It appears that the KoNonduna ward was established at the time of the reign of Mdibane and lasted until the time of the attack by Mzilikazi during Sibindi's reign (Van Schalkwyk et.al 1996:49-50).

The first Bantu language speakers in the area were the so-called Transvaal Ndebele, specifically the southern group. Their history goes back to Chief Msi (Musi) and the genealogy of the Manala (Mahbena) clan, the Ndzundza (Mapoch) clan, the Mathombeni (Kekana) clan and the Hwanda clan (Horn 1996: 23). Chief Msi lived in the Pretoria area somewhere between 1600 and 1700 A.D. His sons divided the tribe in three groups, namely the Hwaduba, Manala and Ndzundza (Horn 1996: 23).

The largest group of Bantu speaking people in the Pretoria area is the Northern Sotho, but Southern Sotho's and Tswanas are also present (Bergh 1999: 106). It seems as if all these groups fled from the area during the Difaquane when Mzilikazi came here in 1827. He killed the men, burned down their villages, confiscated the livestock and took the women to marry members of his impi (Van Vollenhoven 2000: 156). The missionary Jean-Pierre Pellissier even visited Mzilikazi in March 1832. In June/ July of that year he was attacked by the impi of Dingane, the Zulu chief. As a result he left the area during that year (Bergh 1999: 112). This left an area described as being deserted by the missionary Robert Moffat. Sotho groups however started moving back into the area after Mzilikazi left (Junod 1955: 68).

No Iron Age sites, features or cultural material was identified during the assessment of the study area.

The historical age started with the first recorded oral histories in the area. It includes the moving into the area of people that were able to read and write. The 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. 1839 J.G.S. Bronkhorst settled on the farm Elandspoort. He was the first permanent white settler in the area (Van Vollenhoven 2005: 17-45). With the establishment of Pretoria (1850) services such as roads, started to develop. The larger area within which the study area is located also played a role during the Anglo-Boer War (1899-1902) and specifically during the Battle of Donkerhoek/Diamond Hill in June 1900 (Bergh 1999: 53-54).

No historical sites, features or material were identified in the direct study area during the assessment, although one Grave Site is known to exist in the general proximity of the R21/Nellmapius Road junction.

Results of the October 2020 study area assessment

No sites, features or material of cultural heritage (archaeological and/or historical) origin or significance were found on the sections of the proposed new road construction and road upgrade during the assessment. The closest known site is a historical graveyard containing around 14 graves located in the general area of the R21/Nellmapius Drive junction. This site is located in the so-called Rietvlei Business Park Development, and the graves are part of an

ongoing investigation and later relocation project. The grave site will however not be impacted by the proposed Road project that the current study is focusing on.

As indicated earlier the proposed K54/M31 Road Upgrade and Construction Project area is located in areas that have already been developed and nearly completely altered from its original natural landscape. It traverses and skirts urban settlement areas (housing estates, as well as more informal townships), with sections of it following existing roads and road servitudes in between urban settlement areas. As a result of these recent urban developments and related infrastructure, if any sites were present here in the past it would have been extensively disturbed or completely destroyed.



Figure 3: Closer view of the Atterbury to Garsfontein Road section of the K54 Road (Google Earth 2020).



Figure 4: A view down the road from the Atterbury junction down to the Garsfontein Road junction.



Figure 5: Another view down the road towards Garsfontein.



Figure 6: A view of the K54 Road section close to the Garsfontein Road.



Figure 7: Closer view of the K54 Road section between Garsfontein Road and the Delmas Road (R50). Google Earth 2020.



Figure 8: A view of the K54 Road route from Garsfontein Road towards the R50.



Figure 9: Another view of the K54 Road route between the R50 Delmas Road & Garsfontein.



Figure 10: A view of the K54 Road close to the R50 looking east.



Figure 11: A view of the K54 Road route towards the Delmas Road.



Figure 12: A view of the K54 route close to the Delmas Road junction.



Figure 13: Closer view of the M31 to R21 Road Upgrade section (Google Earth 2020). The Rietvlei Nature Reserve is visible here as well.



Figure 14: A view of a section of the existing M31 road that will be upgraded.



Figure 15: A view close to the Nellmapius Drive junction towards the R21.



Figure 16: A closer view of the M31 section close to the R21. The location of the known Grave Site is indicated (Google Earth 2020).

It should be noted that although all efforts are made to cover a total area during any assessment and therefore to identify all possible sites or features of cultural (archaeological and/or historical) heritage origin and significance, that there is always the possibility of something being missed. This will include low stone-packed or unmarked graves. This aspect should be kept in mind when development work commences and if any sites (including graves) are identified then an expert should be called in to investigate and recommend on the best way forward.

7. CONCLUSIONS AND RECOMMENDATIONS

APelser Archaeological Consulting (APAC) was appointed by Bokamoso Landscape Architects & Environmental Consultants CC to conduct a Phase 1 Heritage Impact Assessment for the proposed K54/M31 Road Upgrade & Construction Project. The study area is located in the Tshwane Metropolitan Municipality of Gauteng and on various Portions of Rietfontein 375 JR, Rietvallei 377 JR, Garstfontein 374 JR, Doornkloof 391 JR and the Remainder of Portion 499 of Zwavelpoort 373 JR.

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The proposed M31/K54 (Nellmapius Drive) construction and upgrade covering a distance of approximately 11km will entail the upgrade of the M31/K54 (Nellmapius Drive) from the R21 freeway up to the R50 (Delmas Road), and the construction of the planned provincial route M31/K54 from the R50 (Delmas Road) eastwards crossing the M30 (Garsfontein Road) up to the M11 (Atterbury Road), consisting of one lane per direction. Intersections along the abovementioned route will also be upgraded. The proposed road construction and upgrade will occur on various Portions of Rietfontein 375 JR, Rietvallei 377 JR, Garstfontein 374 JR, Doornkloof 391 JR and the Remainder of Portion 499 of Zwavelpoort 373 JR.

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The proposed K54/M31 Road Upgrade and Construction Project area is located in areas that have already been developed and nearly completely altered from its original natural landscape. It traverses and skirts urban settlement areas (housing estates, as well as more informal townships), with sections of it following existing roads and road servitudes in between urban settlement areas. A part of the study area is situated close to Rietvlei Nature Reserve.

No sites, features or material of cultural heritage (archaeological and/or historical) origin or significance were found on the sections of the proposed new road construction and road upgrade during the assessment. The closest known site is a historical graveyard containing around 14 graves located in the general area of the R21/Nellmapius Drive junction. This site is located in the so-called Rietvlei Business Park Development, and the graves are part of an ongoing investigation and later relocation project. The grave site will however not be impacted by the proposed Road project that the current study is focusing on.

It should be noted 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.

Finally, from a Cultural Heritage point of view it is concluded that the proposed K54/M31 Road Construction & Upgrade Project should be allowed to continue, taking the above recommendations into consideration.

8. REFERENCES

General and Closer views of study area location: Google Earth 2020.

Location of Heritage Sites: Google Earth 2020.

Study Area Location Map: Provided by Bokamoso Landscape Architects and Environmental Consultants CC

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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.