

**Archaeological and Heritage Impact
Assessment Report for Proposed
Expansion of Centurion Cemetery, City of
Tshwane.**

April 2018

Archaeological and Heritage Impact
Assessment (A/HIA) for proposed Centurion
cemetery in City of Tshwane

April 2018

For and on behalf of City of Tshwane

Approved by: Dr. Murimbika

Signed:

Position: Principal Investigator

Date: April 2018

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Authorship: This Report has been prepared by Dr. M. Murimbika (Principal Investigator & Professional Archaeologist). The report is for the review of the Heritage Resources Agency (SAHRA).

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Geographic Co-ordinate Information: Geographic co-ordinates in this report were obtained using a hand-held Garmin Global Positioning System device. The manufacturer states that these devices are accurate to within +/- 5 m.

Maps: Maps included in this report use data extracted from the NTS Map and Google Earth Pro.

Disclaimer: The Author is not responsible for omissions and inconsistencies that may result from information not available at the time this report was prepared.

The Archaeological and Heritage Impact Assessment Study was carried out within the context of tangible and intangible cultural heritage resources as defined by the SAHRA Regulations and Guidelines as to the authorization for proposed expansion of centurion Cemetery.

Signed by Principal Investigator:

Dr Murimbika (Ph.D.).

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EXECUTIVE SUMMARY

Background

Nzumbululo Holdings was commissioned by City of Tshwane to conduct environmental assessment of the proposed expansion of a Cemetery on the remainder of portion 3 of the farm Brakfontein 390 JR, Zwartkop, Centurion. This report includes an impact study on potential archaeological and cultural heritage resources that may be associated with the project site proposed development.

Method Statement

The findings of this report have been informed by desktop data review, field survey and impact assessment reporting which include recommendations to guide heritage authorities in making decisions with regards to the proposed project. This study was conducted as part of the specialist input to the Basic Environmental Impact Assessment exercise. The study and this report follow the South African Heritage Resources Agency (SAHRA) Guidelines for phase 1 AIA/HIA.

Nature of Proposed Development

This study is part of an EIA exercise triggered by proposed expansion of the cemetery. The proposed development will entail:

- Natural underground burial method (ii) Associated infrastructure:
- The construction of internal roads
- Parking area
- Security wall enclosing the cemetery
- Municipality engineering services.

Project Area

The proposed development is located on a seven-hectare portion of the farm Brakfontein 390 Jr Zwartkop, Centurion. The entire project area is brown field previously disturbed bordered with existing and contemporary cemetery, commercial developments, residential housing area and a highway on one side.

The Heritage Impact Assessment Process

This HIA study report is segmented into sections as follows:

1. Executive Summary,
2. Project Background,
3. HIA on the Project Receiving Cultural Landscape project area in line with the NHRA (*Act 25 Section 38*), and
4. Heritage Management Recommendations for immediate project receiving area covering the development, operation to closure phases of the project.

The impact assessment study also includes detailed recommendations on how to mitigate and manage potential negative impacts of the proposed development while enhancing positive effects on the project area.

The Legal Framework and Guidelines

This HIA study is a specialist study to the EIA process and it is guided by the:

- National Heritage Resources Act, (*Section 38 of Act 25 of 1999*)
- SAHRA AMP HIA Guideline
- Terms of Reference provided by Nzumbululo

All South African heritage assets are protected by the National Heritage Resources Act of 1999, which makes it an offence to destroy heritage resources without permission from the relevant authority. In terms of the provisions of the NHRA Act of 1999, individual sites within the project area enjoy the varying levels of protection.

Results of the Study

The project receiving area is situated on previously disturbed land parcels. As such, the proposed development will be an *in situ* extension of cemetery that will be contained within existing developments. Intangible impacts to the sense of a place within the project's receiving environment was assessed and deemed to be limited given the level of disturbance in the project footprint area and fact the proposed development is uniform to the existing cemetery.

Recommendations

The project footprint area was assessed and rated as having low cultural heritage significance. No archaeological materials were identified. The following recommendations are made in this report:

- The project area is predominantly brown-field previously developed and disturbed. No significant impacts are anticipated on the project receiving site or built environment given the existence of contemporary built-infrastructure or structures already in the project area.
- However, the proposed development is extension of existing cemetery park. There is a War Memorial and Wall of Remembrance in the current cemetery. It is recommended that the CoT develops a Heritage Management Plan to guide the City's Parks department manage and maintain the war memorial and war cemetery on site.
- No mitigation is proposed because the receiving environment is currently in disturbed and the proposed cemetery is in line with existing use in the next land parcel.
- Overall, impacts to heritage resources are not considered to be significant for the project-receiving environment. It is thus concluded that the project may be cleared to proceed as planned subject to the Heritage Authority ensuring that detailed Heritage Management Plan is developed for the existing War Memorial site in the current cemetery that is ear marked for extension. Furthermore, heritage monitoring procedures should be included in the project EMP for the construction phase. These should include chance archaeological finds mitigation procedure in the project EMP specifically to cover subsurface construction activities.
- The findings of this report, with approval of the SAHRA, may be classified as accessible to any interested and affected parties within the limits of the laws.

ABBREVIATIONS

AIA	Archaeological Impact Assessment
APPA	Atmospheric Pollution Prevention Act 45 of 1965
BID	Background Information Document
C	Contractor
CARA	Conservation of Agricultural Resources Act, 1983 (Act No 43)
CECO	Construction Environmental Conservation Officer
DEA	Department of Environmental Affairs
DSR	Draft Scoping Report
DWA	Department of Water Affairs
EAP	Environmental Assessment Practitioner
ECA	Environmental Conservation Act
ECO	Environmental Conservation Officer
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
EM	Environmental Manager
EMP	Environmental Management Plan
EMPr	Environmental Management Programme
EMPR	Environmental Management Programme Report
EMS	Environmental Management System
GN	General Notice
GNR	General Notice Regulation
Ha	Hectares
HIA	Heritage Impact Assessment
HMP	Heritage Management Plan
I&AP's	Interested and Affected Parties
IDP	Integrated Development Plan
IRR	Issues and Responses Report
IWULA	Integrated Water Use Licence Application
LIA	Late Iron Age
LFC	Late Farming Community
LSA	Late Stone Age
MIA	Middle Iron Age
MSA	Middle Stone Age
NEMA	National Environmental Management Act 107 of 1998
NEMAQA	National Environmental Management: Air Quality Act 39 of 2004
NEMPAA	National Environmental Management Protected Areas Act
NEMWA	National Environmental Management: Waste Act 59 of 2008
NGO	Non-Government Organisation
NHRA	Nation Heritage Resources Act, Act 25 of 1999
PM	Project Manager
SAHRA	South African Heritage Resources Agency
SM	Site Manager
ToR	Terms of Reference

DEFINITIONS

The following terms used in this Archaeological /Heritage Impact Assessment are defined in the National Heritage Resources Act [NHRA], Act Nr. 25 of 1999, South African Heritage Resources Agency [SAHRA] Policies as well as the Australia ICOMOS Charter (*Burra Charter*):

Archaeological Material remains resulting from human activities, which are in a state of disuse and are in, or on, land and which are older than 100 years, including artifacts, human and hominid remains, and artificial features and structures.

Chance Finds means Archaeological artefacts, features, structures or historical cultural remains such as human burials that are found accidentally in context previously not identified during cultural heritage scoping, screening and assessment studies. Such finds are usually found during earth moving activities such as trench excavations.

Compatible use means a use, which respects the cultural significance of a place. Such a use involves no, or minimal, impact on cultural significance.

Conservation means all the processes of looking after a place so as to retain its cultural significance.

Cultural Heritage Resources Same as **Heritage Resources** as defined and used in the National Heritage Resources Act (*Act No. 25 of 1999*). Refer to physical cultural properties such as archaeological and paleontological sites; historic and prehistoric places, buildings, structures and material remains; cultural sites such as places of ritual or religious importance and their associated materials; burial sites or graves and their associated materials; geological or natural features of cultural importance or scientific significance. **Cultural Heritage Resources** also include **intangible resources** such as religion practices, ritual ceremonies, oral histories, memories and indigenous knowledge.

Cultural significance means aesthetic, historic, scientific, social or spiritual value for past, present or future generations.

Cultural Significance also encompasses the complexities of what makes a place, materials or intangible resources of value to society or part of, customarily assessed in terms of aesthetic, historical, scientific/research and social values.

Environment The surroundings within which humans exist and that are made up of: i. the land, water and atmosphere of the earth;

ii. micro-organisms, plant and animal life;

iii. any part or combination of (i) and (ii) and the interrelationships among and between them; and,

iv. the physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and well-being. This includes the economic, social, cultural, historical and political circumstances, conditions and objects that affect the existence and development of an individual, organism or group.

Environmental impact assessment An Environmental Impact Assessment (EIA) refers to the process of identifying, predicting and assessing the potential positive and negative social, economic and biophysical impacts of any proposed project, plan, programme or policy which requires authorisation of permission by law and which may significantly affect the environment. The EIA includes an evaluation of alternatives. As well as recommendations for appropriate mitigation measures for minimising or avoiding negative impacts, measures enhancing the positive aspects of the proposal and environmental management and monitoring measures.

Expansion means the modification, extension, alteration or upgrading of a facility, structure or infrastructure at which an activity takes place in such a manner that the capacity of the facility or the footprint of the activity is increased;

Fabric means all the physical material of the place including components, fixtures, contents and objects.

Grave A place of interment (*variably referred to as burial*), including the contents, headstone or other marker of such a place, and any other structure on or associated with such place. A grave may occur in isolation or in association with others where upon it is referred to as being situated in a cemetery (*contemporary*) or **Burial Ground** (*historic*).

Heritage impact assessment (HIA) refers to the process of identifying, predicting and assessing the potential positive and negative cultural, social, economic and biophysical impacts of any proposed project, plan, programme or policy which requires authorisation of permission by law and which may significantly affect the cultural and natural heritage resources. The HIA includes recommendations for appropriate mitigation measures for minimising or avoiding negative impacts, measures enhancing the positive aspects of the proposal and heritage management and monitoring measures.

Historic Material remains resulting from human activities, which are younger than 100 years, but no longer in use, including artefacts, human remains and artificial features and structures.

Impact The positive or negative effects on human well-being and / or on the environment.

In Situ material culture and surrounding deposits in their original location and context, for example an archaeological site that has not been disturbed by farming.

Interested and affected parties Individuals, communities or groups, other than the proponent or the authorities, whose interests may be positively or negatively affected by the proposal or activity and/ or who are concerned with a proposal or activity and its consequences.

Interpretation means all the ways of presenting the cultural significance of a place.

Late Iron Age this period is associated with the development of complex societies and state systems in southern Africa.

Material culture means buildings, structure, features, tools and other artefacts that constitute the remains from past societies.

Mitigate The implementation of practical measures to reduce adverse impacts or enhance beneficial impacts of an action.

Place means site, area, land, landscape, building or other work, group of buildings or other works, and may include components, contents, spaces and views.

Protected area means those protected areas contemplated in section 9 of the NEMPAA and the core area of a biosphere reserve and shall include their buffers;

Public participation process A process of involving the public in order to identify issues and concerns, and obtain feedback on options and impacts associated with a proposed project, programme or development. Public Participation Process in terms of NEMA refers to: a process in which potential interested and affected parties are given an opportunity to comment on, or raise issues relevant to specific matters

Setting means the area around a place, which may include the visual catchment.

Significance can be differentiated into impact magnitude and impact significance. Impact magnitude is the measurable change (*i.e. intensity, duration and likelihood*). Impact significance is the value placed on the change by different affected parties (*i.e. level of significance and acceptability*). It is an anthropocentric concept, which makes use of value judgments and science-based criteria (*i.e. biophysical, physical cultural, social and economic*).

Site A distinct spatial cluster of artefacts, structures, organic and environmental remains, as residues of past human activity.

Use means the functions of a place, as well as the activities and practices that may occur at the place.

1. INTRODUCTION

1.1. Background

The study focuses on identifying and assessing potential impacts on archaeological, as well as on other physical cultural properties including historical heritage and intangible resources in relation to the proposed expansion of the cemetery on Portion 3 of the Farm Brakfontein 390 J, Zwartkop, Centurion. This report outlines the desktop study, review of previous heritage assessment studies in the general area, field study and presents results of the study as well as discussion on the anticipated impacts of the proposed development as is required by the National Heritage Resources Act, (Act 25 of 1999) Section 38. The proposed project area is located at S: 25°51'54.79" E: -28°10'24.51" in Zwartkops, Centurion. The current cemetery is 8.8 ha in size had reached its full capacity and the community requires a site to resume with burial of their loved ones. Therefore, the City of Tshwane Municipality is required to expand the area by 7.6ha in size and in order to begin they require an approval for environmental authorization from the competent authority.

The Finishing Touch team headed by Dr Murimbika, a professional and accredited principal archaeologist and heritage management and risk specialist, undertook the assessments, research and consultations required for the preparation of the report for the purpose of ensuring that the cultural environmental values are taken into consideration and reported into the EIA authorisations and EMP processes spanning the proposed life span of the proposed extension of the cemetery and associated developments.

In line with SAHRA guidelines, this section of the report, not necessarily in that order, provides:

- 1) Management summary
- 2) Methodology
- 3) Information with reference to the desktop study
- 4) Map and relevant geodetic images and data
- 5) GPS co-ordinates
- 6) Directions to the site
- 7) Site description and interpretation of the cultural area where the project will take place
- 8) Management details, description of affected cultural environment, photographic records of the project area
- 9) Recommendations regarding the significance of the site and recommendations regarding further monitoring of the site
- 10) Conclusion.

1.2. NATURE OF PROPOSED DEVELOPMENT

The study concerns the proposed establishment of:

- Natural underground burial method (ii) Associated infrastructure:
- The construction of internal roads
- Parking area
- Security wall enclosing the cemetery
- Municipality engineering services.

The stated aims of the project are:

- Provision of Heritage Services – Phase 1 Mapping, Reporting
- Grave Survey, Verification and relocation permit application.

1.3. STATUTORY REQUIREMENTS

Legislative requirements of Act 25 of 1999.

Protected sites in terms of the National Heritage Resources Act, Act No. 25 of 1999

The following are the most important sites and objects protected by the National

The NHRA stipulates that cultural heritage resources may not be disturbed without authorization from the relevant heritage authority. Section 34 (1) of the NHRA states that “no person may alter or demolish any structure or part of a structure which is older than 60 years without a permit issued by the relevant provincial heritage resources authority...” The NEMA (No107of1998) states that an integrated EMP should (23:2(b)) “...identify, predict and evaluate the actual and potential impact on the environment, socio-economic conditions and cultural heritage”. In accordance with legislative requirements and EIA rating criteria, the regulations of SAHRA have also been incorporated to ensure that a comprehensive legally compatible HIA report is compiled.

As highlighted in introductory sections of this report, the study specifically focuses on archaeological sites, historic structures and burial grounds and graves affected by the planned CoT Centurion Cemetery Extension development. All burial grounds and individual graves are protected by law irrespective of their age. Furthermore, there are regulations, which control handling and management of human remains and grave goods. Specifically, in terms of the Section 36 (3) of the National Heritage Resources Act, 1999 (Act No. 25 of 1999) 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 equipment, or any equipment, which assists in the detection or recovery of metals.

Therefore, in addition to the formal protection of culturally significance graves, all graves which are older than 60 years and which are not already located in a cemetery (such as ancestral graves in rural areas), are protected. Communities, which have an interest in the graves, must be consulted before any disturbance can take place. The graves of victims of conflict and those associated with the liberation struggle will have to be included, cared for, protected and memorials erected in their honour where practical. Regarding graves and burial grounds, the NHRA distinguishes between the following:

- Ancestral graves
- Royal graves and graves of traditional leaders
- Graves of victims of conflict
- Graves of individuals designated by the Minister by notice in the Gazette
- Historical graves and cemeteries
- Other human remains, which are not covered in terms of the Human Tissue Act, 1983 (Act No.65 of 1983).

All human remains are also protected under the Human Tissue Act, 1983 (Act No.65 of 1983). In addition, Municipal Ordinances provide for both burial grounds/cemetery and gravesites within certain localities.

2. GRAVES OUTSIDE NHRA PROTECTION

Graves younger than 60 years fall under Section 2(1) of the Removal of Graves and Dead Bodies Ordinance (Ordinance no. 7 of 1925) as well as the Human Tissues Act (Act 65 of 1983) and are the jurisdiction of the National Department of Health and the relevant Provincial Department of Health and must be submitted for final approval to the Office of the relevant Provincial Premier.

This function is usually delegated to the Provincial MEC for Local Government and Planning or in some cases the MEC for Housing and Welfare. Authorisation for exhumation and reinternment must also be obtained from the relevant local or regional council where the grave is situated, as well as the relevant local or regional council to where the grave is being relocated. All local and regional provisions, laws and by-laws must also be adhered to. In order to handle and transport human remains the institution conducting the relocation should be authorised under Section 24 of Act 65 of 1983 (Human Tissues Act).

Graves older than 60 years, but younger than 100 years fall under Section 36 of Act 25 of 1999 (National Heritage Resources Act) as well as the Human Tissues Act (Act 65 of 1983) and are the jurisdiction of the South African Heritage Resource Agency (SAHRA).

The procedure for Consultation Regarding Burial Grounds and Graves (Section 36(5) of Act 25 of 1999) is applicable to graves older than 60 years that are situated outside a formal cemetery administrated by a local authority. Graves in the category located inside a formal cemetery administrated by a local authority will also require the same authorisation as set out for graves younger than 60 years over and above SAHRA authorisation.

If the grave is not situated inside a formal cemetery but is to be relocated to one, permission from the local authority is required and all regulations, laws and by-laws set by the cemetery authority must be adhered to.

3. HIA STUDY TERMS OF REFERENCE

This HIA study was commissioned under the guidance of the requirements of Section 38(3) of the NHRA. As outlined in the introduction section, the activities would include:

1. Hypothesising and Conducting a detailed desk-top level investigation to identify all archaeological, cultural and historic sites in the proposed expansion of the cemetery;
2. Conduct appropriate physical cultural properties field work and survey to verify results of desktop investigation;
3. During the field survey, document (*GPS coordinates and map*) all archaeological and heritage sites, objects and structures and physical cultural properties identified within the project's receiving environment;
4. Compile a Heritage Impact Assessment report which would include:
 - a. Identification of archaeological, cultural and historic sites within the affected development areas;
 - b. Assess the sensitivity and significance of archaeological remains within the affected development areas;
 - c. Estimation and evaluation of the potential impacts of the proposed construction, operation and maintenance of the proposed development on archaeological, cultural and historic sites in the proposed project receiving areas;
 - d. Measure the impacts in terms of the scale of impact
 - e. Provide appropriate Recommendation of mitigation measures that may add positive impacts while reducing the identified negative impacts on archaeological, cultural and historic sites in the proposed project receiving areas;
 - f. The recommendations should be applicable enough to effectively guide the compliance authorities in issuing a decision regarding the authorisation of the proposed development.
 - g. Consideration of relevant SAHRA as well and international best practices guidelines; and,

- h. Development Heritage Management Planning guideline: “Guideline for involving heritage stakeholders in the processes”.

In essence, both the national heritage and environmental legislations provide protection for the following categories of heritage resources:

- Landscapes, cultural or natural;
- Buildings or structures older than 60 years;
- Archaeological Sites, palaeontological material and meteorites;
- Burial grounds and graves;
- Public monuments and memorials;
- Living heritage (defined as including cultural tradition, oral history, performance, ritual, popular memory, skills and techniques, indigenous knowledge systems and the holistic approach to nature, society and social relationships).

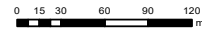
4. LOCATION OF ACTIVITY AREA AND IMPACT AREA

The proposed development is situated in Centurion , City of Tshwane, Gauteng Province (see Figure 1 & 2).

Figure 1: Google Earth image showing study area ()



REMAINDER OF PORTION 3 OF THE FARM BRAKFORTEIN 390 JR, ZWARTKOP, CENTURION



5. METHODOLOGY

The proposed project development requires clearance and authorisation from environmental provincial government compliance agencies including the heritage authority or SAHRA. Key HIA objectives for this section of the study are to fulfil the statutory requirements of the National Heritage Resources Act, Act 25 of 1999. In order to meet the objectives of the HIA Phase 1 study, the following tasks were conducted: 1) site file search, 2) literature review, 3) consultations with key stakeholders, 4) completion of a field survey and assessment and 5) analysis of the acquired data and report production. The following tasks were undertaken:

- Preparation of a predictive model for archaeological heritage resources in the study area.
- A review and gap analysis of archaeological, historical and cultural background information, including possible previous heritage consultant reports specific to the affected project area, the context of the study area and previous land use history as well as a site search;
- Field survey of the expansion of Centurion Cemetery;
- Physical cultural property recording of any identified sites or cultural heritage places;
- Identification of heritage significance; and
- Preparation of HIA report with recommendation, planning constraints and opportunities associated with the proposed development.

The project area is part of an existing and previously developed and disturbed landscape along main roads and street servitudes and infrastructure, rural settlements, informal settlements and other auxiliary infrastructures dominate the affected project area.

Geographic coordinates were obtained with a handheld Garmin GPS global positioning unit. Photographs were taken as part of the documentation process during field study.

5.1. Assumptions and Limitations

The field survey did not include any form of subsurface inspection beyond the inspection of centurion cemetery and the sections exposed by erosion or earth moving disturbances. Some assumptions were made as part of the study and therefore some limitations, uncertainties and gaps in information would apply. It should however, be noted that these do not invalidate the findings of this study in any significant way.

1. The proposed expansion of the cemetery project development will be limited to specific portions of sites and laydown areas as detailed in the cemetery development (see figure 1).
2. The construction teams to work at the development site and service sites will use the existing access roads and there will be no major deviations into undisturbed sections.

3. Given the extensive degraded nature on most affected project areas and the high level of existing developments within the affected landscape, most sections of the project area have low potential to yield high significant in situ archaeological or physical cultural properties.
4. No excavations or sampling was undertaken, since a permit from heritage authorities is required to disturb a heritage resource. As such the results herein discussed are based on surface indicators. However, these surface observations concentrated on areas accessible.
5. No Palaeontological study was conducted as part of this HIA.
6. This study did not include any ethnographic and oral interviews. The existing studies from current and historic researches are accepted as adequate for the purposes of this HIA.

5.2. Consultation

No independent community consultation was conducted during this phase of the A/HIA study. However, the EIA Public Participation Process invited comments from affected communities and other interested parties on any matter related to the proposed expansion of the cemetery.

3. BRIEF CULTURE HISTORY BACKGROUND OF THE PROJECT AREA

Based on the literature survey, the description of the archaeology of the area is as follows:

Centurion (previously known as Verwoerdburg, after Hendrik Frensch Verwoerd is an area with 279,430 inhabitants in City of Tshwane, Gauteng Province of South Africa, located between Pretoria and Midrand Johannesburg). Formerly an independent municipality, with its own town council, it is now part of the City of Tshwane Metropolitan Municipality. The site is located in the vicinity of the intersection of the N1 and N14 highways. The R21 also passes through Centurion.

19th Century

The recent peopling of the region dates back to the Iron Age and history. From 1825 to 1826 the Matabele peoples, migrating from the Zulu Kingdom on the east coast defeated the Bakwena tribe and settled along the banks of the Magalies River under the leadership of Mzilikazi.

In 1841 the Erasmus family arrived and settled in the area that would much later (circa 1995) become Centurion. Daniel Jacobus Erasmus settled on the farm Zwartkop, Daniel Elardus Erasmus on the farm Doornkloof and Rasmus Elardus Erasmus developed the farm Brakfontein. Several of the suburbs like Erasmia, Elardus Park, Zwartkop and Doornkloof were named after these 19th century settler community owners of the land and their properties.

In 1849 Rev Andrew Murray visited the farm Doornkloof and christened 129 babies, heard the confession of their faith of 29 new members of the Reformed Church and the next day, 29 December 1849, celebrated communion.

In 1889 Alois Hugo Nelmapius bought the northern and north-eastern portions of the farm Doornkloof and named it after his daughter Irene (who died 1961).

First Anglo-Boer War

As part of the First Boer War, the battle for Rooihuiskraal (Afrikaans for "Red House Kraal") took place in 1881 in this region. A Boer commando under the leadership of D.J. Erasmus Jr defeated Colonel Gildea, or "The Blasted Colonel" as they called him, the British Officer Commanding of the Pretoria Garrison. After the cornered British garrison tried to escape to Natal to join General George Pomeroy Colley, the Boers entrenched themselves behind a stone wall surrounding the animal stockade, and wounded the colonel in the backside, who was standing upright in his stirrups.

The South African War (Second Anglo-Boer War)

During the Second Boer War the Irene Concentration Camp was established in 1901 on the farm Doornkloof, as part of the British scorched earth policy, where Boer women and children were housed under extremely poor conditions. At its peak the camp had 5,500 inhabitants, mostly women and children. Between February 1901 and the end of the war in 1902, 1249 lost their lives here, about 1000 of them children. The Irene Camp Cemetery is well preserved and contains 576 of the original slate tombstones that was carved by hand in the camp.

20th Century

The town of Irene was established in 1902 when 337 plots were laid out on the farm Doornkloof. Jan Smuts later owned this farm and died there in 1950. The original Smuts House is a museum today, and regularly hosts open air fleamarkets on its grounds.

Centurion developed from the initial Lyttelton Township that was marked out on the farm Drooge grond in 1904. Lyttelton Manor Extension 1 was established in 1942. These two townships initially resorted under the Peri Urban Board in Pretoria. Centurion was granted City Council status in 1962 as Lyttelton. It was formed by combining the areas of Doornkloof, Irene and Lyttelton. Lyttelton was renamed Verwoerdburg in 1967, after Hendrik Verwoerd, the so-called "architect of apartheid". The surrounding areas, as they grew, came under the same name and Lyttelton became known as one of the suburbs of Verwoerdburg. Others included Clubview, Eldoraigne, Wierdapark, Zwartkop and their extensions.

In 2000, the Centurion local government became part of the newly-created City of Tshwane Metropolitan Municipality, which also includes Pretoria, and the town ceased to have its own Town Council.

The political neutral name *Centurion* has no significance, and was chosen by residents in 1995, soon after the end of apartheid, to match the name of the Centurion Park (now called SuperSport Park) cricket ground which is located northeast of the project site but in the general area. Following the end of apartheid, the Indian township of Laudium and surrounding suburbs including Erasmia and Claudius, which were formerly a part of Pretoria, were made part of Centurion. A black township, called Olievenhoutbosch, was created in Centurion at around the same time.

5. RESULTS OF THE ARCHAEOLOGICAL/HERITAGE ASSESSMENT STUDY - DESCRIPTION OF PROJECT AREA

The proposed expansion of centurion cemetery project area is located at S: 25o51'54.79" E: -28o10'24.51" in Zwartkops, Centurion. The current burial site or cemetery which is 8.8 ha in size had reached its full capacity and the community requires a site to resume with burial of their loved ones. Therefore, the City of Tshwane Municipality is required to expand the area by 7.6ha in size and in order to begin they require an approval for environmental authorization from the competent authority.

Figure 2: Typologies Map showing the cemetery and associated infrastructure.

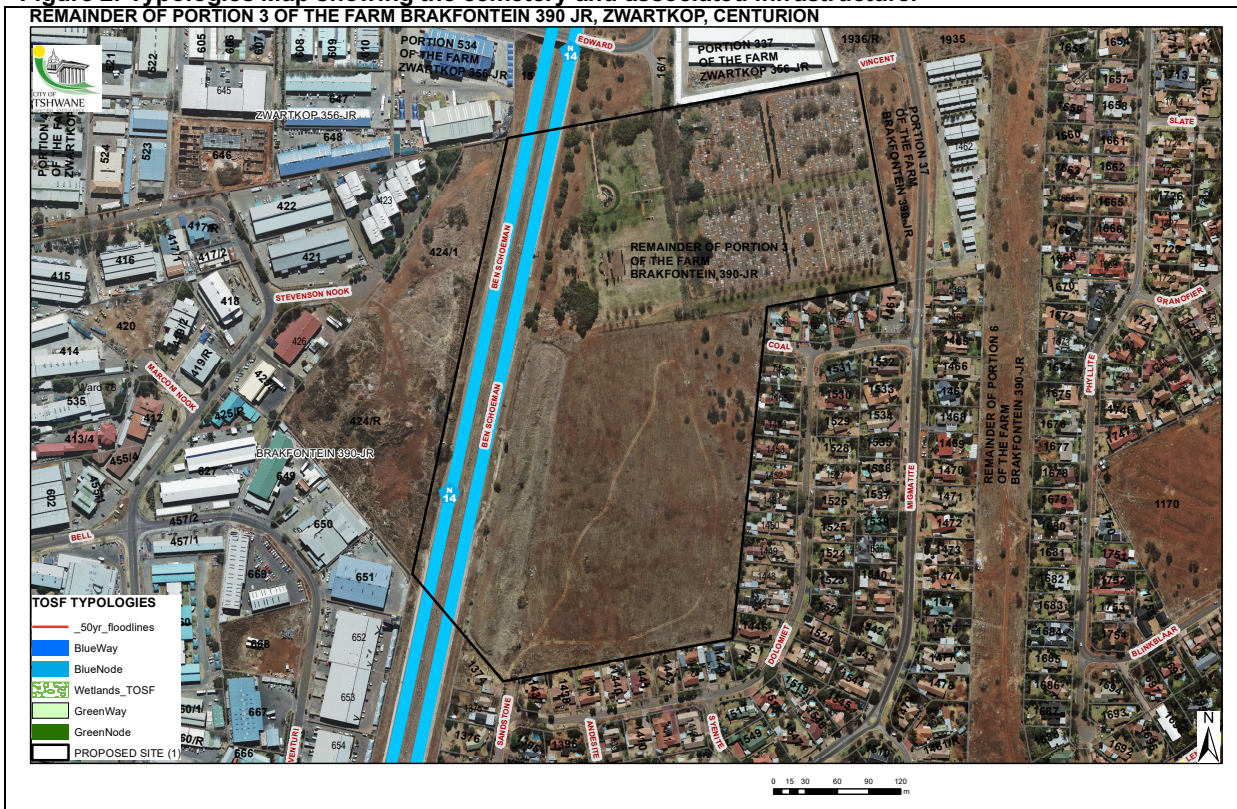




Plate 1: Photo 1 shows point existing cemetery (Author 2018). Note that the servitude is within residential. Plate 2: Photos 2 (above right) and 3 (left below) shows proposed cemetery. (Photos by Author 2018).



Plate 3: Photos 4 (right top) and 5 (left above) continues to show the proposed cemetery servitude (Author 2018). Plate 5: Shows the boundary of the proposed cemetery close to the residential area (Author 2018).

5.3. Archaeological finds

No archaeological finds were recorded on the proposed Cemetery Site. However, there are roads, residential, commercial, cemetery and associated infrastructures across the entire project area the proposed expansion will be additional to in situ developments already on the project area.

5.4. Historical and Built Environment

In general, the project area forms part of the general Tshwane historic landscape associated with colonial era white settlers, colonial wars, industrialization, recent and contemporary African population settlements, and contemporary ritual sites dating to the last hundred years. Although the affected general landscape is associated with historical events such as white settler migration, colonial wars and the recent African peopling of the region, no listed specific historical sites are on the proposed development sites.

5.5. Burial grounds and graves

The field survey did not identify any burial site along the proposed cemetery expansion area. The possibility of encountering previously unidentified burial sites is low, however, should such sites be identified during subsurface construction work, they are still protected by applicable legislations and they should be protected (also see Appendixes for more details).

However, the site is part of an existing cemetery dating to 1965. There is an existing War graves, a War Memorial and a Wall of Remembrance in the current cemetery. The proposed project does not interfere with the war memorial and remembrance site. There is no existing Heritage Management Plan for the memorial heritage in the current cemetery.

5.6. Historical Monuments

The field survey did not record any additional historical monuments in the proposed development site.

5.7. Cultural landscapes

The project area is in an established urban residential area associated with an existing cemetery reaching its full capacity. There are commemoration War graves, Memorial Wall and a Garden of Remembrance in the old current cemetery. The memorial facilities are not affected by the proposed cemetery extension.

5.8. Scenic Routes, Sense of Place and Visual Concerns

The project area site can be accessed via the N14. The study area is visible from the regional and local main roads and it is an altered environment dominated an existing contemporary cemetery that

is surrounded by built up areas. This represents a pre-existing visual detractor from the sense of place and scenic value from the road. However, it should be borne in mind that the proposed development is an in-situ development adding to existing developments within the area. Therefore any possible visual impacts to the project area is less significant and would be of reduced concern given the observation that this concern is already overridden by existing impact.

6. DISCUSSION

Although no archaeological traces or significant historic remains or sites were recorded, literature review revealed that some archaeological sites may occur within built up and general areas. The following observations are worth emphasizing in this discussion prior to making final recommendations:

- The absence of confirmable and significant archaeological cultural heritage sites is not evidence in itself that such in situ sites did not exist in the project area.

7. CULTURAL HERITAGE SITE ASSESSMENT OF SIGNIFICANCE

The appropriate management of cultural heritage resources is usually determined on the basis of their assessed significance as well as the likely impacts of any proposed developments. Cultural significance is defined in the Burra Charter as meaning aesthetic, historic, scientific or social value for past, present and future generations (Article 1.2). Social, religious, cultural and public significance are currently identified as baseline elements of this assessment, and it is through the combination of these elements that the overall cultural heritage values of the site of interest, associated place or area are resolved.

7.1. Assessment Criteria

The Guidelines to the SAHRA Guidelines and the Burra Charter define the following criterion for the assessment of cultural significance:

Aesthetic Value

Aesthetic value includes aspects of sensory perception for which criteria can and should be stated. Such criteria may include consideration of the form, scale, colour, texture and material of the fabric; sense of place, the smells and sounds associated with the place and its use.

Historic Value

Historic value encompasses the history of aesthetics, science and society, and therefore to a large extent underlies all of the terms set out in this section. The overall Centurion area has as a place has historic value because it has influenced, or has been influenced by, an historic figure, event, phase or

activity. It may also have historic value as the site of an important event. For any given place the significance will be greater where evidence of the association or event survives in situ, or where the settings are substantially intact, than where it has been changed or evidence does not survive. However, some events or associations may be so important that the place retains significance regardless of subsequent treatment.

Scientific value

The scientific or research value of a place will depend upon the importance of the data involved, on its rarity, quality or representativeness, and on the degree to which the place may contribute further substantial information. Scientific value is also enshrined in natural resources that have significant social value. For example, pockets of forests and bushvelds have high ethnobotany value.

Social Value

Social value embraces the qualities for which a place has become a focus of spiritual, religious, political, local, national or other cultural sentiment to a majority or minority group. Social value also extend to natural resources such as bushes, trees and herbs that are collected and harvested from nature for herbal and medicinal purposes.

7.2. Evaluation of Heritage Resource

Based on the information from the national South African Heritage Resources Agency standards of best practice and minimum standards, data capture forms were used to collect information from the field through site condition surveys and observations. After the data was gathered from the field was combined with information from other sources it was deemed essential to establish the value and significance of individual sites as well as to identify any threats to the heritage. The South African National Heritage Resources Act 25 of 1999 grading scale was used to assess significance.

ICOMOS Ranking	South African Legislation (National Heritage Resources Act Ranking)
<ul style="list-style-type: none"> • Very high (World Heritage Sites) 	National Heritage Sites (Grade 1)
<ul style="list-style-type: none"> • High (Nationally significant sites) 	National Heritage Sites (Grade 1), Grade 2 (Provincial Heritage Sites), burials
<ul style="list-style-type: none"> • Medium (regionally significant sites) 	Grade 3a
<ul style="list-style-type: none"> • Low (locally significant sites) 	Grade 3b
<ul style="list-style-type: none"> • Negligible 	Grade 3c
<ul style="list-style-type: none"> • Unknown 	Grade 3a

Table 1: Significance assessment of heritage resources based on ICOMOS and NHRA criteria.

8. STATEMENT OF SIGNIFICANCE

8.1. Aesthetic Value

The aesthetic values of the centurion cemetery HIA Study Area are contained in the residential environment and landscape typical of this part of the Gauteng Province. The visual and physical relationship between HIA study area and the surrounding cultural Landscape demonstrates the connection of place to the local and oral historical stories of the communities who populated this region going back into prehistory.

The proposed expansion of the Cemetery and associated infrastructure will be situated within an environment and associated cultural landscape, which, although developed by existing residential and cemetery, remains representative of the original historical environment and cultural landscape of Centurion. The local communities consider the project area a cultural landscape linked to their ancestors and history. However, the proposed developments will not alter this value in any radical or more than it already has been since it will add to the constantly changing and developing settlements (Table below).

Table 2: Assessment of impacts to Aesthetic Values related to the scenic routes and sense of place

	Before Mitigation	After Mitigation
Magnitude	Low	NA
Extent Local -	Local	NA
Duration Long term -	Long term	NA
Significance	Low -	NA
Probability	Definite -	NA
Status	Negative -	NA
Reversible	No	NA
Cumulative	The cemetery may lead to cumulative visual impacts to the landscape if they were to be constructed. This may be of concern and will detract peoples' experience of the general regional sense of place as a result of the cemetery expansion.	

8.2. Historic Value

There are currently no places within the proposed development area that are listed on the National Heritage List. No heritage resource is affected by the proposed development and as such no significance may be ascribed to the project receiving area. However, the current cemetery property, neighbouring the area affected by the proposed extension development, has heritage value associated with the war graves on part of the cemetery and Wall of Remembrance and associated Memorial site.

Table 3: Assessment of impacts to Historic Values related to the project area.

	Before Mitigation	After Mitigation
Magnitude	Low	Low
Extent Local -	Specific Site	Specific Site
Duration Long term -	Long term	Long term
Significance	Low -	Low -
Probability	Definite -	Probable
Status	Negative -	Negative -
Reversible	Yes (with rehabilitation after plant is decommissioned)	No
Cumulative	None will be affected by this development.	

8.3. Scientific value

No archaeological or any significance is attached to the project receiving site.

Table 4: Assessment of impacts to Archaeological Scientific Values related to the project area.

	Before Mitigation	After Mitigation
Magnitude	Low	NA
Extent Local -	Specific Site	NA
Duration Long term -	Long term	NA
Significance	Low -	NA
Probability	Definite -	NA
Status	Negative -	NA
Reversible	No	NA
Cumulative	No archaeological resources falling within the project area were identified. Since no significant pre-colonial resources occur, cumulative impacts are thus not of concern on this site.	

8.4. Social Value

The overall area has social value for the local community, as is the case with any populated landscape. It is part of an existing burial ground and the proposed development will extend the cemetery's life span. The land provides the canvas upon which daily socio-cultural activities are painted. All these factors put together confirm the social significance of the project area. However, this social significance is not going to be negatively impacted by the proposed expansion of the Cemetery especially given the fact that the development will add value and activities already taking place. In addition, the area is already affected by development and this project is an addition to already existing infrastructure such as Cemetery, roads, light industrial and residential developments.

9. RECOMMENDATIONS

1. From a heritage perspective supported by the findings of this study, the expansion of the Centurion Cemetery is feasible for the proposed project. However, the proposed expansion should be approved to proceed as planned under observation that construction work does not extend beyond the proposed servitude.

2. The existing cemetery contain war graves, Wall of Remembrance and Memorial sites that must be preserved and managed as part of the park that will become from the decommissioning of the current cemetery. As such, as part of the proposed development, It is recommended that a Heritage Management Plan for the old cemetery war graves and memorial sites and Wall of Remembrance should be developed and submitted to heritage authorities for consideration.
3. Subject to the recommendations herein made and the implementation of the mitigation measures and adoption of the project EMP, there are no significant cultural heritage resources barriers to the proposed Expansion of the Centurion Cemetery. The Heritage authority may approve the proposed development to proceed as planned with special commendations to implement the recommendations here in made.

9.1. Management & Policy Recommendations

A Heritage Management Plan should be developed for the old cemetery and it should be implemented as part of the project EMP.

10. CONCLUDING REMARKS

The literature review, field research and subsequent impact assessment confirmed that the project area is situated within a contemporary cultural landscape dotted with urban settlements that have long local history. Field survey was conducted during which it was established that the affected project area is degraded by existing and previous land use activities and developments. This report concludes that the proposed expansion of the Cemetery may be approved by Heritage Authority to proceed as planned subject to conditional parallel development of a Heritage Management Plan for the memorial sites within the current cemetery which is now earmarked for expansion. These recommendations will form part of the heritage monitoring measures in the project EMP (also see Appendices) and chance finds procedures for the construction phase.

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12. APPENDIX 1: HUMAN REMAINS AND BURIALS IN DEVELOPMENT CONTEXT

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Developers, land use planners and professional specialist service providers often encounter difficult situations with regards to burial grounds, cemeteries and graves that may be encountered in development contexts. This may be before or during a development project. There are different procedures that need to be followed when a development is considered on an area that will impact upon or destroy existing burial grounds, cemeteries or individual graves. In contexts where human remains are accidentally found during development work such as road construction or building construction, there are different sets of intervention regulations that should be instigated. This brief is an attempt to highlight the relevant regulations with emphasis on procedures to be followed when burial grounds, cemeteries and graves are found in development planning and development work contexts. The applicable regulations operate within the national heritage and local government legislations and ordinances passed in this regard. These guidelines assist you to follow the legal pathway.

1. First, establish the context of the burial:

A. Are the remains less than 60 years old? If so, they may be subject to provisions of the Human Tissue Act, Cemeteries Ordinance(s) and to local, regional, or municipal regulations, which vary from place to place. The finding of such remains must be reported to the police but are not automatically protected by the National Heritage Resources Act (Act 25 of 1999).

B. Is this the grave of a victim of conflict? If so, it is protected by the National Heritage Resources Act (Section 36(3a)). (Relevant extracts from the Act and Regulations are included below).

C. Is it a grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority? If so, it is protected by the National Heritage Resources Act (Section 36(3b)).

D. Are the human or hominid remains older than 100 years? If so, they are protected by the National Heritage Resources Act (Section 35(4), see also definition of "archaeological" in Section 2).

2. Second, refer to the terms of the National Heritage Resources Act most appropriate to the situation, or to other Acts and Ordinances:

A. Human remains that are NOT protected in terms of the National Heritage Resources Act (i.e. less than 60 years old and not a grave of a victim of conflict or of cultural significance) are subject to provisions of the Human Tissue Act and to local and regional regulations, for example Cemeteries Ordinances applicable in different Provincial and local Authorities.

B). All finds of human remains must be reported to the nearest police station to ascertain whether or not a crime has been committed.

C). If there is no evidence for a crime having been committed, and if the person cannot be identified so that their relatives can be contacted, the remains may be kept in an institution where certain conditions are fulfilled. These conditions are laid down in the Human Tissue Act (Act No. 65 of 1983). In contexts where the local traditional authorities given their consent to the unknown remains to be re-buried in their area, such re-interment may be conducted under the same regulations as would apply for known human remains.

3. In the event that a graveyard is to be moved or developed for another purpose, it is incumbent on the local authority to publish a list of the names of all the persons buried in the graveyard if there are gravestones or simply a notification that graves in the relevant graveyard are to be disturbed. Such a list would have to be compiled from the names on the gravestones or from parish or other records. The published list would call on the relatives of

the deceased to react within a certain period to claim the remains for re-interment. If the relatives do not react to the advertisement, the remains may be re-interred at the discretion of the local authority.

A. However, it is the responsibility of the developer to ensure that none of the affected graves within the cemetery are burials of victims of conflict. The applicant is also required in line with the heritage legislation to verify that the graves have no social significance to the local communities.

B. It is illegal in terms of the Human Tissue Act for individuals to keep human remains, even if they have a permit, and even if the material was found on their own land.

4. The Exhumations Ordinance (Ordinance No. 12 of 1980 and as amended) is also relevant. Its purpose is "To prohibit the desecration, destruction and damaging of graves in cemeteries and receptacles containing bodies; to regulate the exhumation, disturbance, removal and re-interment of bodies, and to provide for matters incidental thereto". This ordinance is supplemented and support by local authorities regulations, municipality by-laws and ordinances.

DEFINITIONS AND APPLICABLE REGULATIONS

1). A "Cemetery" is defined as any land, whether public or private, containing one or more graves.

2). A "grave" includes "(a) any place, whether wholly or partly above or below the level of ground and whether public or private, in which a body is permanently interred or intended to be permanently interred, whether in a coffin or other receptacle or not, and (b) any monument, tombstone, cross, inscription, rail, fence, chain, erection or other structure of whatsoever nature forming part of or appurtenant to a grave.

3). No person shall desecrate, destroy or damage any grave in a cemetery, or any coffin or urn without written approval of the Administrator.

4). No person shall exhume, disturb, remove or re-inter anybody in a cemetery, or any coffin or urn without written approval of the Administrator.

5). Application must be made for such approval in writing, together with:

a). A statement of where the body is to be re-interred.

b). Why it is to be exhumed.

c). The methods proposed for exhumation.

d). Written permission from local authorities, nearest available relatives and their religious body owning or managing the cemetery, and where all such permission cannot be obtained, the application must give reasons why not.

6). The Administrator has the power to vary any conditions and to impose additional conditions.

7). Anyone found guilty and convicted is liable for a maximum fine of R200 and maximum prison sentence of six months.

5. Human remains from the graves of victims of conflict, or any burial ground or part thereof which contains such graves and any other graves that are deemed to be of cultural significance may not be destroyed, damaged, altered, exhumed or removed from their original positions without a permit from the National Heritage Resources Agency. They are administered by the Graves of Conflict Division at the SAHRA offices in Johannesburg.

"Victims of Conflict" are:

a). Those who died in this country as a result of any war or conflict but excluding those covered by the Commonwealth War Graves Act, 1992 (Act No. 8 of 1992).

b). Members of the forces of Great Britain and the former British Empire who died in active service before 4 September 1914.

c). Those who, during the Anglo Boer War (1899-1902) were removed from South Africa as prisoners and died outside South Africa, and,

d). Those people, as defined in the regulations, who died in the "liberation struggle" both within and outside South Africa.

6. Any burial that is older than 60 years, which is outside a formal cemetery administered by a local authority, is protected in terms of Section 36(3b) of the National Heritage Resources Act. No person shall destroy damage, alter, exhume or remove from its original position, remove from its original site or export from the Republic any such grave without a permit from the SAHRA.

There are some important new considerations applicable to B & C (above).

SAHRA may, for various reasons, issue a permit to disturb a burial that is known to be a grave of conflict or older than 65 years, or to use, at a burial ground, equipment for excavation or the detection or the recovery of metals.

(Permit applications must be made on the official form Application for Permit: Burial Grounds and Graves available from SAHRA or provincial heritage resources authorities.) Before doing so, however, SAHRA must be satisfied that the applicant:

- a). Has made satisfactory arrangements for the exhumation and re-interment of the contents of such a grave at the cost of the applicant.
- b). Has made a concerted effort to contact and consult communities and individuals who by tradition have an interest in such a grave and,
- c). Has reached an agreement with these communities and individuals regarding the future of such a grave or burial ground.

PROCEDURE FOR CONSULTATION

The regulations in the schedule describe the procedure of consultation regarding the burial grounds and graves. These apply to anyone who intends to apply for a permit to destroy damage, alter, remove from its original position or otherwise disturb any grave or burial ground older than 60 years that is situated outside a formal cemetery administered by a local authority. The applicant must make a concerted effort to identify the descendants and family members of the persons buried in and/or any other person or community by tradition concerned with such grave or burial ground by:

- 1). Archival and documentary research regarding the origin of the grave or burial ground;
- 2). Direct consultation with local community organizations and/or members;
- 3). The erection for at least 60 days of a notice at the grave or burial ground, displaying in all the official languages of the province concerned, information about the proposals affecting the site, the telephone number and address at which the applicant can be contacted by any interested person and the date by which contact must be made, which must be at least 7 days after the end of the period of erection of the notice; and
- 4). Advertising in the local press.

The applicant must keep records of the actions undertaken, including the names and contact details of all persons and organizations contacted and their response, and a copy of such records must be submitted to the provincial heritage resources authority with the application.

Unless otherwise agreed by the interested parties, the applicant is responsible for the cost of any remedial action required.

If the consultation fails to reach an agreement, the applicant must submit records of the consultation and the comments of all interested parties as part of the application to the provincial heritage resources authority.

In the case of a burial discovered by accident, the regulations state that when a grave is discovered accidentally in the course of development or other activity:

- a). SAHRA or the provincial heritage resources authority (or delegated representative) must, in co-operation with the Police, inspect the grave and decide whether it is likely to be older than 60 years or otherwise protected in terms of the Act; and whether any further graves exist in the vicinity.
- b). If the grave is likely to be so protected, no activity may be resumed in the immediate vicinity of the grave, without due investigation approved by SAHRA or the provincial heritage resources authority; and
- c). SAHRA or the provincial heritage resources authority may at its discretion modify these provisions in order to expedite the satisfactory resolution of the matter.
- d). Archaeological material, which includes human and hominid remains that are older than 100 years (see definition in section 2 of the Act), is protected by the National Heritage Resources Act (Section 35(4)), which states that no person may, without a permit issued by the responsible heritage resources authority - destroy, damage, excavate, alter or remove from its original site any archaeological or palaeontological material.

The implications are that anyone who has removed human remains of this description from the original site must have a permit to do so. If they do not have a permit, and if they are convicted of an offence in terms of the National Heritage Resources Act as a result, they must be liable to a maximum fine of R100 000 or five years imprisonment, or both.

TREAT HUMAN REMAINS WITH RESPECT

- a). Every attempt should be made to conserve graves in situ. Graves should not be moved unless this is the only means of ensuring their conservation.
- b). The removal of any grave or graveyard or the exhumation of any remains should be preceded by an historical and archaeological report and a complete recording of original location, layout, appearance and inscriptions by means of measured drawings and photographs. The report and recording should be placed in a permanent archive.
- c). Where the site is to be re-used, it is essential that all human and other remains be properly exhumed and the site left completely clear.
- d). Exhumations should be done under the supervision of an archaeologist, who would assist with the identification, classification, recording and preservation of the remains.
- e). No buried artefacts should be removed from any protected grave or graveyard without the prior approval of SAHRA. All artefacts should be re-buried with the remains with which they are associated. If this is not possible, proper arrangements should be made for the storage of such relics with the approval of SAHRA.
- f). The remains from each grave should be placed in individual caskets or other suitable containers, permanently marked for identification.
- g). The site, layout and design of the area for re-interment should take into account the history and culture associated with, and the design of, the original grave or graveyard.
- h). Re-burials in mass graves and the use of common vaults are not recommended.
- i). Remains from each grave should be re-buried individually and marked with the original grave markers and surrounds.
- j). Grouping of graves, e.g. in families, should be retained in the new layout.
- k). Material from the original grave or graveyard such as chains, kerbstones, railing and should be re-used at the new site wherever possible.
- l). A plaque recording the origin of the graves should be erected at the site of re-burial.
- m). Individuals or groups related to the deceased who claim the return of human remains in museums and other institutions should be assisted to obtain documentary proof of their ancestral linkages.

13. APPENDIX 2: HERITAGE MANAGEMENT PLAN INPUT INTO THE CENTURION CEMETERY EMP

Objective Protection of archaeological sites and land considered to be of cultural value; Protection of known physical cultural property sites against vandalism, destruction and theft; and The preservation and appropriate management of new archaeological finds should these be discovered during construction.								
No.	Activity	Mitigation Measures	Duration	Frequency	Responsibility	Accountable	Contacted	Informed
Pre-Construction Phase								
1	Planning	Ensure all known sites of cultural, archaeological, and historical significance are demarcated on the site layout plan, and marked as no-go areas.	Throughout Project	Weekly Inspection	Contractor [C] CECO	SM	ECO	EA EM PM
Construction Phase								
1	Emergency Response	Should any archaeological or physical cultural property heritage resources be exposed during excavation for the purpose of construction, construction in the vicinity of the finding must be stopped until heritage authority has cleared the development to continue.	N/A	Throughout	C CECO	SM	ECO	EA EM PM
		Should any archaeological, cultural property heritage resources be exposed during excavation or be found on development site, a registered heritage specialist or PHRA official must be called to site for inspection.		Throughout	C CECO	SM	ECO	EA EM PM
		Under no circumstances may any archaeological, historical or any physical cultural property heritage material be destroyed or removed from site;		Throughout	C CECO	SM	ECO	EA EM PM
		Should remains and/or artifacts be discovered on the development site during earthworks, all work will cease in the area affected and the Contractor will immediately inform the Construction Manager who in turn will inform Heritage Authority/SAHRA.		When necessary	C CECO	SM	ECO	EA EM PM
		Should any remains be found on site that is potentially human remains, the PHRA and South African Police Service should be contacted.		When necessary	C CECO	SM	ECO	EA EM PM
Rehabilitation Phase								
		Same as construction phase.						
Operational Phase								
		Same as construction phase.						

Appendix 3: heritage mitigation measure table

Site Ref	HERITAGE Aspect	POTENTIAL IMPACT	Mitigation measures	Responsible PARTY	Penalty	Method Statement required
Chance Archaeological and Burial Sites	General area where the proposed project is situated is a historic landscape, which may yield archaeological, cultural property, remains. There are possibilities of encountering unknown archaeological sites during subsurface construction work which may disturb previously unidentified chance finds.	<p>Possible damage to previously unidentified archaeological and burial sites during construction phase.</p> <p>Unanticipated impacts on archaeological sites where project actions inadvertently uncovered significant archaeological sites.</p> <p>Loss of historic cultural landscape;</p> <p>Destruction of burial sites and associated graves</p> <p>Loss of aesthetic value due to construction work</p> <p>Loss of sense of place</p> <p>Loss of intangible heritage value due to change in land use</p>	<p>In situations where unpredicted impacts occur construction activities must be stopped and the heritage authority should be notified immediately.</p> <p>Where remedial action is warranted, minimize disruption in construction scheduling while recovering archaeological data. Where necessary, implement emergency measures to mitigate.</p> <p>Where burial sites are accidentally disturbed during construction, the affected area should be demarcated as no-go zone by use of fencing during construction, and access thereto by the construction team must be denied.</p> <p>Accidentally discovered burials in development context should be salvaged and rescued to safe sites as may be directed by relevant heritage authority. The heritage officer responsible should secure relevant heritage and health authorities permits for possible relocation of affected graves accidentally encountered during construction work.</p>	Contractor / Project Manager Archaeologist Project EO	Fine and or imprisonment under the PHRA Act & NHRA	<p>Monitoring measures should be issued as instruction within the project EMP.</p> <p>PM/EO/Archaeologists Monitor construction work on sites where such development projects commences within the farm.</p>

14. APPENDIX 4: LEGAL BACKGROUND AND PRINCIPLES OF HERITAGE RESOURCES MANAGEMENT IN SOUTH AFRICA

Extracts relevant to this report from the National Heritage Resources Act No. 25 of 1999, (Sections 5, 36 and 47):

General principles for heritage resources management

5. (1) All authorities, bodies and persons performing functions and exercising powers in terms of this Act for the management of heritage resources must recognize the following principles:

(a) Heritage resources have lasting value in their own right and provide evidence of the origins of South African society and as they are valuable, finite, non-renewable and irreplaceable they must be carefully managed to ensure their survival;

(b) every generation has a moral responsibility to act as trustee of the national heritage for succeeding generations and the State has an obligation to manage heritage resources in the interests of all South Africans;

(c) heritage resources have the capacity to promote reconciliation, understanding and respect, and contribute to the development of a unifying South African identity; and

(d) heritage resources management must guard against the use of heritage for sectarian purposes or political gain.

(2) To ensure that heritage resources are effectively managed—

(a) the skills and capacities of persons and communities involved in heritage resources management must be developed; and

(b) provision must be made for the ongoing education and training of existing and new heritage resources management workers.

(3) Laws, procedures and administrative practices must—

(a) be clear and generally available to those affected thereby;

(b) in addition to serving as regulatory measures, also provide guidance and information to those affected thereby; and

(c) give further content to the fundamental rights set out in the Constitution.

(4) Heritage resources form an important part of the history and beliefs of communities and must be managed in a way that acknowledges the right of affected communities to be consulted and to participate in their management.

(5) Heritage resources contribute significantly to research, education and tourism and they must be developed and presented for these purposes in a way that ensures dignity and respect for cultural values.

(6) Policy, administrative practice and legislation must promote the integration of heritage resources conservation in urban and rural planning and social and economic development.

(7) The identification, assessment and management of the heritage resources of South Africa must—

(a) take account of all relevant cultural values and indigenous knowledge systems;

(b) take account of material or cultural heritage value and involve the least possible alteration or loss of it;

(c) promote the use and enjoyment of and access to heritage resources, in a way consistent with their cultural significance and conservation needs;

(d) contribute to social and economic development;

(e) safeguard the options of present and future generations; and

(f) be fully researched, documented and recorded.

Burial grounds and graves

36. (1) Where it is not the responsibility of any other authority, SAHRA must conserve and generally care for burial grounds and graves protected in terms of this section, and it may make such arrangements for their conservation as it sees fit.

(2) SAHRA must identify and record the graves of victims of conflict and any other graves which it deems to be of cultural significance and may erect memorials associated with the grave referred to in subsection (1), and must maintain such memorials.

(3) (a) No person may, without a permit issued by SAHRA or a provincial 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, 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 equipment, or any equipment which assists in the detection or recovery of metals.

(4) SAHRA or a provincial heritage resources authority may not issue a permit for the destruction or damage of any burial ground or grave referred to in subsection (3) (a) unless it is satisfied that the applicant has made satisfactory arrangements for the exhumation and re-interment of the contents of such graves, at the cost of the applicant and in accordance with any regulations made by the responsible heritage resources authority.

(5) SAHRA or a provincial heritage resources authority may not issue a permit for any activity under subsection (3)(b) unless it is satisfied that the applicant has, in accordance with regulations made by the responsible heritage resources authority—

(a) made a concerted effort to contact and consult communities and individuals who by tradition have an interest in such grave or burial ground; and

(b) reached agreements with such communities and individuals regarding the future of such grave or burial ground.

(6) Subject to the provision of any other law, any person who in the course of development or any other activity discovers the location of a grave, the existence of which was previously unknown, must immediately cease such activity and report the discovery to the responsible heritage resources authority which must, in co-operation with the South African Police Service and in accordance with regulations of the responsible heritage resources authority—

(a) carry out an investigation for the purpose of obtaining information on whether or not such grave is protected in terms of this Act or is of significance to any community; and

(b) if such grave is protected or is of significance, assist any person who or community which is a direct descendant to make arrangements for the exhumation and re-interment of the contents of such grave or, in the absence of such person or community, make any such arrangements as it deems fit.

(7) (a) SAHRA must, over a period of five years from the commencement of this Act, submit to the Minister for his or her approval lists of graves and burial grounds of persons connected with the liberation struggle and who died in exile or as a result of the action of State security forces or agents provocateur and which, after a process of public consultation, it believes should be included among those protected under this section.

(b) The Minister must publish such lists as he or she approves in the Gazette.

(8) Subject to section 56(2), SAHRA has the power, with respect to the graves of victims of conflict outside the Republic, to perform any function of a provincial heritage resources authority in terms of this section.

(9) SAHRA must assist other State Departments in identifying graves in a foreign country of victims of conflict connected with the liberation struggle and, following negotiations with the next of kin, or relevant authorities, it may re-inter the remains of that person in a prominent place in the capital of the Republic.

General policy

47. (1) SAHRA and a provincial heritage resources authority—

(a) must, within three years after the commencement of this Act, adopt statements of general policy for the management of all heritage resources owned or controlled by it or vested in it; and

(b) may from time to time amend such statements so that they are adapted to changing circumstances or in accordance with increased knowledge; and

(c) must review any such statement within 10 years after its adoption.

(2) Each heritage resources authority must adopt for any place which is protected in terms of this Act and is owned or controlled by it or vested in it, a plan for the management of such place in accordance with the best environmental, heritage conservation, scientific and educational principles that can reasonably be applied taking into account the location, size and nature of the place and the resources of the authority concerned, and may from time to time review any such plan.

(3) A conservation management plan may at the discretion of the heritage resources authority concerned and for a period not exceeding 10 years, be operated either solely by

the heritage resources authority or in conjunction with an environmental or tourism authority or under contractual arrangements, on such terms and conditions as the heritage resources authority may determine.

(4) Regulations by the heritage resources authority concerned must provide for a process whereby, prior to the adoption or amendment of any statement of general policy or any conservation management plan, the public and interested organisations are notified of the availability of a draft statement or plan for inspection, and comment is invited and considered by the heritage resources authority concerned.

(5) A heritage resources authority may not act in any manner inconsistent with any statement of general policy or conservation management plan.

(6) All current statements of general policy and conservation management plans adopted by a heritage resources authority must be available for public inspection on request.

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