



PGS HERITAGE

Proposed Meiringspark Extensions 10 and 11

Located on Portion 603 and Part of Portion 604 of the Farm Townlands of Klerksdorp 424 IP, Klerksdorp, City of Matlosana Local Municipality, Dr Kenneth Kaunda District Municipality, North West Province

Heritage Impact Assessment

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REVISION HISTORY

Version	Issue Date	Description of Changes
001	2023/04/20	First draft version of the report submitted to client
002	2023/04/20	Final version of report submitted to client

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Declaration of Independence

I, Polke D. Birkholtz, declare that –

- General declaration:
- I act as the independent heritage practitioner in this application
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting heritage impact assessments, including knowledge of the Act, Regulations and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, Regulations and all other applicable legislation;
- I will take into account, to the extent possible, the matters listed in section 38 of the NHRA when preparing the application and any report relating to the application;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the competent authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- I will ensure that information containing all relevant facts in respect of the application is distributed or made available to interested and affected parties and the public and that participation by interested and affected parties is facilitated in such a manner that all interested and affected parties will be provided with a reasonable opportunity to participate and to provide comments on documents that are produced to support the application;
- I will provide the competent authority with access to all information at my disposal regarding the application, whether such information is favourable to the applicant or not
- All the particulars furnished by me in this form are true and correct;
- I will perform all other obligations as expected from a heritage practitioner in terms of the Act and the constitutions of my affiliated professional bodies; and
- I realise that a false declaration is an offence in terms of regulation 71 of the Regulations and is punishable in terms of section 24F of the NEMA.

Disclosure of Vested Interest

- I do not have and will not have any vested interest (either business, financial, personal or other) in the proposed activity proceeding other than remuneration for work performed in terms of the Regulations;

HERITAGE CONSULTANT:

PGS Heritage (Pty) Ltd

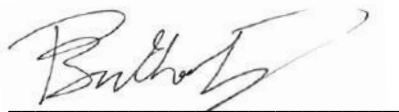
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ACKNOWLEDGEMENT OF RECEIPT

Report Title	Heritage Impact Assessment for the Proposed Meiringspark Extensions 10 and 11 located on Portion 603 and Part of Portion 604 of the Farm Townlands of Klerksdorp 424 IP, Matlosana Local Municipality, Dr Kenneth Kaunda District Municipality, North West Province			
Control	Name	Signature	Designation	
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Reviewed	I Roos		Ecologic Afrika Environmental Assessment Practitioner	

CLIENT: Ecologic Afrika

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The Heritage Impact Assessment Report has been compiled considering the National Environmental Management Act (Act No. 107 of 1998) (NEMA): Appendix 6 of the Environmental Impact Assessment (EIA) Regulations of 2014 (as amended, 2017) requirements for specialist reports as indicated in the table below.

Requirements of Appendix 6 – GN R326 EIA Regulations of 7 April 2017	Relevant section in report
1.(1) (a) (i) Details of the specialist who prepared the report	Pages iii & iv of Report
(ii) The expertise of that person to compile a specialist report including a curriculum vita	Section 1.2 and Appendix A
(b) A declaration that the person is independent in a form as may be specified by the competent authority	Page iii of the report
(c) An indication of the scope of, and the purpose for which, the report was prepared	Section 1.1
(cA) An indication of the quality and age of base data used for the specialist report	N/A
(cB) a description of existing impacts on the site, cumulative impacts of the proposed development and levels of acceptable change;	Section 4
(d) The duration, date and season of the site investigation and the relevance of the season to the outcome of the assessment	Section 3 and Section 4
(e) a description of the methodology adopted in preparing the report or carrying out the specialised process inclusive of equipment and modelling used	Section 3 and Section 4
(f) details of an assessment of the specific identified sensitivity of the site related to the proposed activity or activities and its associated structures and infrastructure, inclusive of a site plan identifying site alternatives;	Section 4
(g) An identification of any areas to be avoided, including buffers	N/A
(h) A map superimposing the activity including the associated structures and infrastructure on the environmental sensitivities of the site including areas to be avoided, including buffers;	Figure 21
(i) A description of any assumptions made and any uncertainties or gaps in knowledge;	Section 1.3
(j) A description of the findings and potential implications of such findings on the impact of the proposed activity, including identified alternatives, on the environment	Section 5
(k) Any mitigation measures for inclusion in the EMPr	Section 6
(l) Any conditions for inclusion in the environmental authorization	Section 6
(m) Any monitoring requirements for inclusion in the EMPr or environmental authorization	N/A
(n)(i) A reasoned opinion as to whether the proposed activity, activities or portions thereof should be authorised and	Executive Summary and Section 7
(n)(iA) A reasoned opinion regarding the acceptability of the proposed activity or activities; and	
(n)(ii) If the opinion is that the proposed activity, activities or portions thereof should be authorised, any avoidance, management and mitigation measures that should be included in the EMPr, and where applicable, the closure plan	Section 6
(o) A description of any consultation process that was undertaken during the course of carrying out the study	N/A
(p) A summary and copies if any comments that were received during any consultation process	N/A
(q) Any other information requested by the competent authority.	N/A
(2) Where a government notice by the Minister provides for any protocol or minimum information requirement to be applied to a specialist report, the requirements as indicated in such notice will apply.	No protocols or minimum standards for HIAs or PIAs

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EXECUTIVE SUMMARY

Introduction

PGS Heritage (Pty) Ltd (PGS) was appointed by Ecologic Afrika to undertake a Heritage Impact Assessment (HIA) that forms part of the Environmental Impact Assessment (EIA) for the proposed Meiringspark Extensions 10 and 11. The proposed activities comprise the clearance of 19,2352 ha of indigenous vegetation and township establishment. The proposed project is located on Portion 603 and Part of Portion 604 of the Farm Townlands of Klerksdorp 424 IP, Klerksdorp, City of Matlosana Local Municipality, Dr Kenneth Kaunda District Municipality, North West Province.

The HIA revealed that the study area was at least partially used as a drive-in theatre. The desktop study undertaken as part of this project revealed that the name of the facility was the Meiringspark Drive-In Theatre and that it appears to have been originally established in c. 1960.

During the heritage fieldwork, the poorly preserved remains of the old drive-in theatre was identified (refer site **MEK 1**). The remains of this drive-in theatre that could still be seen within the study area include tarred roads, ruins of old buildings and a series of terraced and tarred ramps where the vehicles used to park while watching movies. Although the drive-in theatre is believed to be older than 60 years, it is poorly preserved. However, drive-in theatres represent a feature of South Africa's more recent history and heritage that is rapidly disappearing. As a result, the site is deemed to be of **Grade IIIC** or **Low Significance**.

Impact Assessment

The HIA identified the following development impacts on heritage:

- Destruction of the poorly preserved remains of the Meiringspark Drive-In Cinema identified at site **MEK 1**.

Impact assessment calculations were undertaken, which revealed that mitigation measures would be required for the identified site.

Required Mitigation

The following mitigation measures are required for site **MEK 1**:

- The fact that a drive-in theatre was operated within the study area from c. 1960 until the 1990s, coupled with the fact that many drive-theatres are currently being destroyed and are disappearing from memory, indicate that the best way to mitigate the site would be to memorialize the history of this drive-in theatre within the study area;

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- Further research should be undertaken as a way in which to obtain information about the history of the drive-in theatre. This may include archival research and the study of old aerial photographs. Attempts should also be made to obtain photographs that depict the drive-in theatre and the way in which it operated from local residents. Discussions with such former residents who have knowledge of the drive-in theatre should also be undertaken as a way in which to record some of the oral history and memories of the site.
- The mitigation of the drive-in theatre located within the study area should culminate in the memorialization of this facility through printed permanent displays. The displays should contain the information collected and obtained as part of the previous point and should form a permanent feature within the proposed development. These permanent displays should be placed in a public area within the development.
- Apart from the above-mentioned memorialization, no further mitigation measures are required.

Conclusions

On the condition that the general recommendations and mitigation measures outlined in this HIA report are adhered to, and in cognisance of the assumptions and limitations contained in this HIA report, no heritage reasons can be given for the development not to continue.

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A Project team CV's

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TERMINOLOGY AND ABBREVIATIONS

Archaeological resources

This includes:

- material remains resulting from human activity which are in a state of disuse and are in or on land and which are older than 100 years including artefacts, human and hominid remains and artificial features and structures;
- rock art, being any form of painting, engraving or other graphic representation on a fixed rock surface or loose rock or stone, which was executed by human agency and which is older than 100 years, including any area within 10m of such representation;
- wrecks, being any vessel or aircraft, or any part thereof, which was wrecked in South Africa, whether on land, in the internal waters, the territorial waters or in the maritime culture zone of the republic as defined in the Maritimes Zones Act, and any cargo, debris or artefacts found or associated therewith, which is older than 60 years or which SAHRA considers to be worthy of conservation;
- features, structures and artefacts associated with military history which are older than 75 years and the site on which they are found.

Cultural significance

This means aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological value or significance

Development

This means any physical intervention, excavation, or action, other than those caused by natural forces, which may in the opinion of the heritage authority in any way result in a change to the nature, appearance or physical nature of a place or influence its stability and future well-being, including:

- construction, alteration, demolition, removal or change in use of a place or a structure at a place;
- carrying out any works on or over or under a place;
- subdivision or consolidation of land comprising a place, including the structures or airspace of a place;
- constructing or putting up for display signs or boards;
- any change to the natural or existing condition or topography of land; and
- any removal or destruction of trees, or removal of vegetation or topsoil

Early Stone Age

The archaeology of the Stone Age between 700 000 and 2 500 000 years ago.

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Fossil

Mineralised bones of animals, shellfish, plants and marine animals. A trace fossil is the track or footprint of a fossil animal that is preserved in stone or consolidated sediment.

Heritage

That which is inherited and forms part of the National Estate (historical places, objects, fossils as defined by the National Heritage Resources Act 25 of 1999).

Heritage resources

This means any place or object of cultural significance and can include (but not limited to) as stated under Section 3 of the NHRA,

- places, buildings, structures and equipment of cultural significance;
- places to which oral traditions are attached or which are associated with living heritage;
- historical settlements and townscapes;
- landscapes and natural features of cultural significance;
- geological sites of scientific or cultural importance;
- archaeological and palaeontological sites;
- graves and burial grounds, and
- sites of significance relating to the history of slavery in South Africa;

Holocene

The most recent geological time period which commenced 10 000 years ago.

Late Stone Age

The archaeology of the last 30 000 years associated with fully modern people.

Late Iron Age (Early Farming Communities)

The archaeology of the last 1000 years up to the 1800's, associated with iron-working and farming activities such as herding and agriculture.

Middle Stone Age

The archaeology of the Stone Age between 30 000-300 000 years ago, associated with early modern humans.

Palaeontology

Any fossilised remains or fossil trace of animals or plants which lived in the geological past, other than fossil fuels or fossiliferous rock intended for industrial use, and any site which contains such fossilised remains or trace.

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Abbreviations	Description
AIA	Archaeological Impact Assessment
ASAPA	Association of South African Professional Archaeologists
CRM	Cultural Resource Management
ECO	Environmental Control Officer
EIA practitioner	Environmental Impact Assessment Practitioner
EIA	Environmental Impact Assessment
ESA	Early Stone Age
GPS	Global Positioning System
HIA	Heritage Impact Assessment
I&AP	Interested & Affected Party
LSA	Late Stone Age
LIA	Late Iron Age
MSA	Middle Stone Age
MIA	Middle Iron Age
NEMA	National Environmental Management Act
NHRA	National Heritage Resources Act
PHRA-G	Gauteng Provincial Heritage Resources Authority
PHS	Provincial Heritage Site
PSSA	Palaeontological Society of South Africa
SADC	Southern African Development Community
SAHRA	South African Heritage Resources Agency

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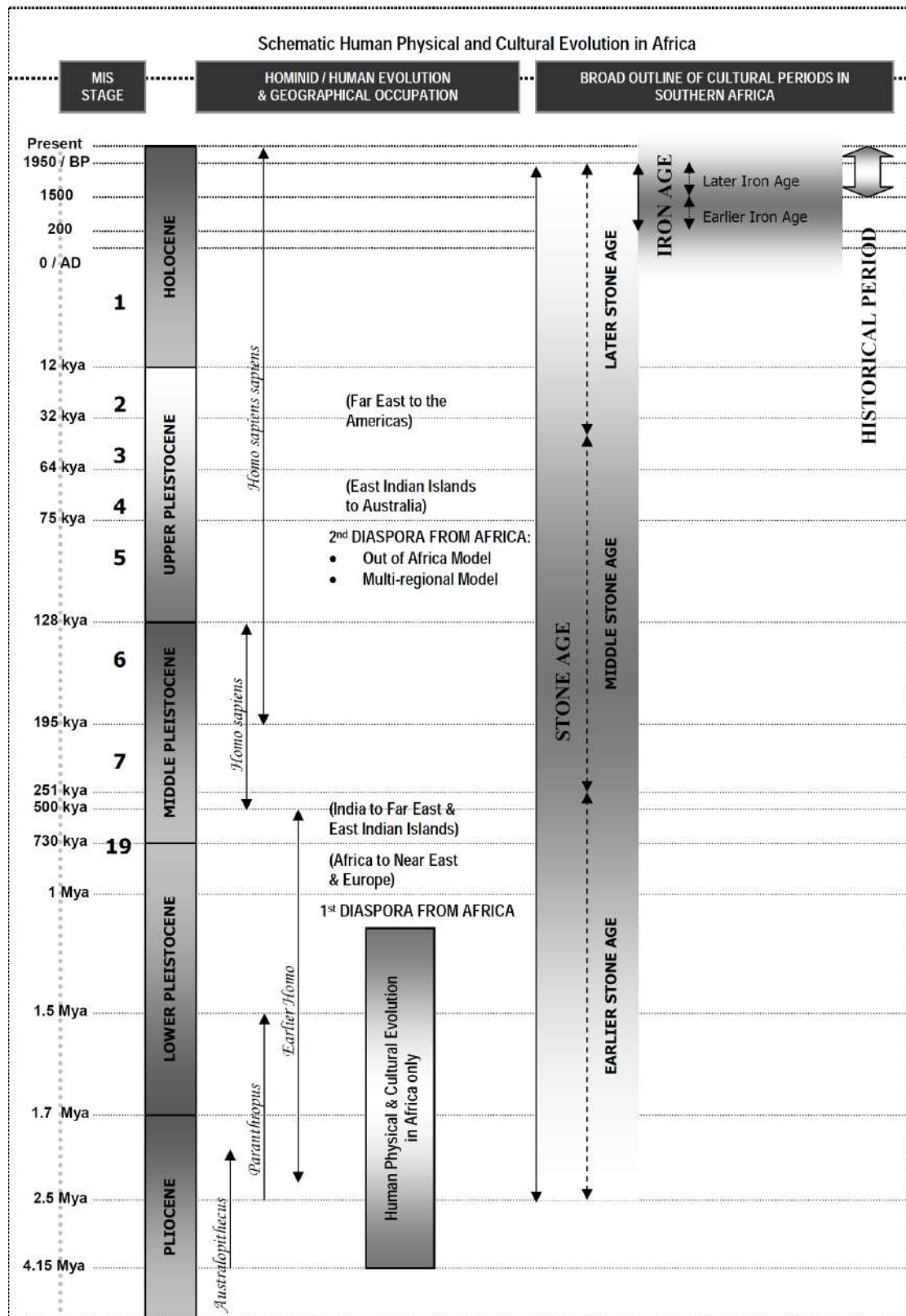


Figure 1 – Human and Cultural Timeline in Africa

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1 INTRODUCTION

PGS Heritage (Pty) Ltd (PGS) was appointed by Ecologic Afrika to undertake a Heritage Impact Assessment (HIA) that forms part of the Environmental Impact Assessment (EIA) for the proposed Meiringspark Extensions 10 and 11. The proposed activities comprise the clearance of 19,2352 ha of indigenous vegetation and township establishment. The proposed project is located on Portion 603 and Part of Portion 604 of the Farm Townlands of Klerksdorp 424 IP, Klerksdorp, City of Matlosana Local Municipality, Dr Kenneth Kaunda District Municipality, North West Province.

1.1 Scope of the Study

The aim of the study is to identify heritage sites and finds that may occur in the proposed project area. The HIA aims to inform the EIA to assist the developer in managing the discovered heritage resources in a responsible manner, in order to protect, preserve, and develop them within the framework provided by the National Heritage Resources Act of 1999 (Act 25 of 1999) (NHRA).

1.2 Specialist Qualifications

This HIA Report was compiled by PGS. The staff at PGS has a combined experience of nearly 80 years in the heritage consulting industry. PGS and its staff have extensive experience in managing HIA processes. PGS will only undertake heritage assessment work where they have the relevant expertise and experience to undertake that work competently.

The following staff members from PGS compiled this study:

- Polke D. Birkholtz, the project manager and principal heritage specialist, is registered with the Association of Southern African Professional Archaeologists (ASAPA) as a Professional Archaeologist and is also accredited with the CRM Section of the same association. He has 22 years of experience in the heritage assessment and management field. He holds a B.A. (cum laude) from the University of Pretoria specialising in Archaeology, Anthropology and History and a B.A. (Hons.) in Archaeology (cum laude) from the same institution.

1.3 Assumptions and Limitations

The following assumptions and limitations can be identified for this report:

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- It is important to realise that the heritage resources located during the fieldwork do not necessarily represent all the possible heritage resources present within the area. This may inter alia be due to dense vegetation cover and the subterranean characteristics of archaeological sites. As a result, it is always possible that the fieldwork findings made in this report are not a complete indication of all the archaeological and heritage fabric from within the study area. Any observed or located heritage features and/or objects may not be disturbed or removed in any way until such time that the heritage specialist has been able to make an assessment as to the significance of the site (or material) in question. This applies to graves and cemeteries as well. In the event that any graves or burial places are identified during the development, the procedures and requirements pertaining to graves and burials as set out elsewhere in this report will apply.
- Dense vegetation in the form of grass, bushes and alien invasive plants characterised extensive sections of the study area. This resulted in limited visibility during the fieldwork.
- No palaeontological studies were included in the present scope of work. The screening assessment has indicated a Medium Significance for palaeontology. As a result, a palaeontological desktop study will be required.

1.4 Legislative Context

The identification, evaluation and assessment of any cultural heritage site, artefact or find in the South African context is required and governed by the following legislation:

- Notice 648 of the Government Gazette 45421- general requirements for undertaking an initial site sensitivity verification where no specific assessment protocol has been identified
- National Environmental Management Act (NEMA), Act 107 of 1998 – Appendix 6
- National Heritage Resources Act (NHRA), Act 25 of 1999

1.4.1 Notice 648 of the Government Gazette 45421

Although minimum standards for archaeological (2007) and palaeontological (2012) assessments were published by SAHRA, GN.648 requires sensitivity verification for a site selected on the national web based environmental screening tool for which no specific assessment protocol related to any theme has been identified. The requirements for this Government Notice (GN) are listed in **Table 1** and the applicable section in this report noted.

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Table 1: Reporting requirements for GN648

GN 648	Relevant section in report	Where not applicable in this report
2.2 (a) a desktop analysis, using satellite imagery;	section 4.3	
2.2 (b) a preliminary on-site inspection to identify if there are any discrepancies with the current use of land and environmental status quo versus the environmental sensitivity as identified on the national web-based environmental screening tool, such as new developments, infrastructure, indigenous/pristine vegetation, etc.	4.1	-
2.3(a) confirms or disputes the current use of the land and environmental sensitivity as identified by the national web-based environmental screening tool;	section 4.1	-
2.3(b) contains motivation and evidence (e.g. photographs) of either the verified or different use of the land and environmental sensitivity;	section 4.1	-

1.4.2 NEMA – Appendix 6 requirements

The HIA report has been compiled considering the NEMA Appendix 6 requirements for specialist reports as indicated in the table below. For ease of reference, the table below provides cross-references to the report sections where these requirements have been addressed.

1.4.3 The National Heritage Resources Act

- National Heritage Resources Act (NHRA) Act 25 of 1999
 - Protection of Heritage Resources – Sections 34 to 36; and
 - Heritage Resources Management – Section 38

The NHRA is utilised as the basis for the identification, evaluation, and management of heritage resources and in the case of Cultural Resource Management (CRM) those resources specifically impacted on by development as stipulated in Section 38 of NHRA. This study falls under s38(8) and requires comment from the relevant heritage resources authority.

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2 TECHNICAL DETAILS OF THE PROJECT

2.1 Locality

2.1.1 Description

The proposed development is located on Portion 603 and Part of Portion 604 of the Farm Townlands of Klerksdorp 424 IP, City of Matlosana Local Municipality and the Dr Kenneth Kaunda District Municipality of the North West Province. The study area is located south of the suburb of Meiringspark, east of the Rio Hotel Casino and Convention Resort and west of the Shell Ultra City Klerksdorp. The northern boundary of the study area is defined by Scheepers Road whereas its southern boundary is located on Main Reef Road.

2.2 Technical Project Description

2.2.1 Project description

The contents of this section were provided by the client.

The proposed activities comprise the proposed establishment of Meiringspark Extensions 10 and 11. The proposed activities comprise the following:

- The clearance of 19,2352 ha of indigenous vegetation; and
- township establishment.

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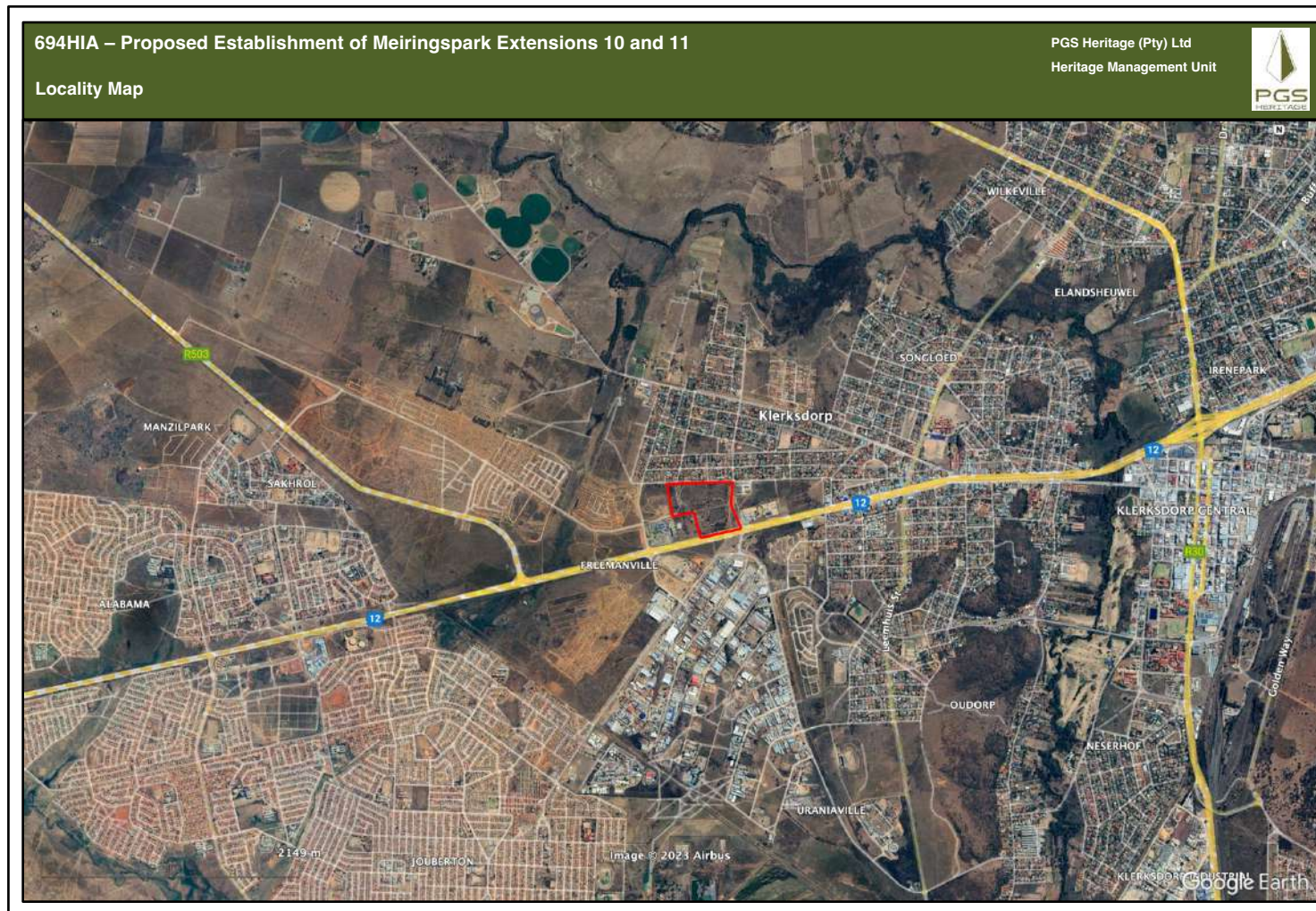


Figure 2 – Locality plan depicting the study area within its surrounding landscape. The boundaries of the study area are shown in red line.

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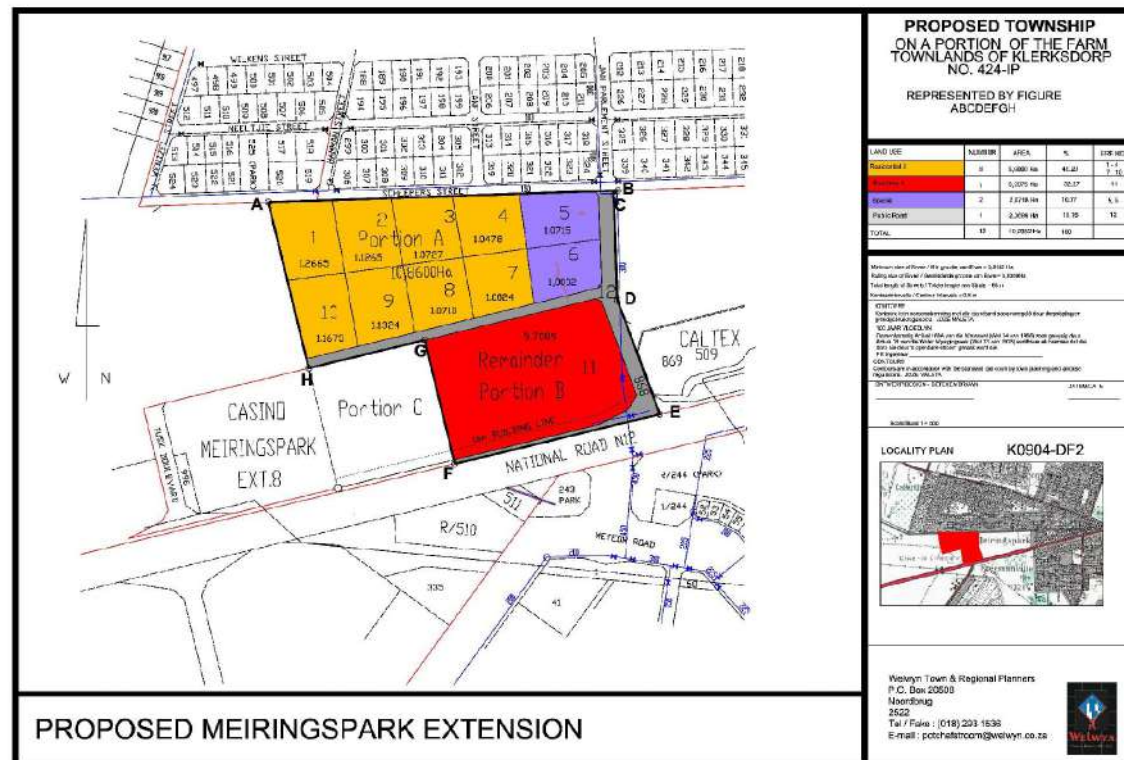


Figure 3 – Proposed development layout plan. This plan was provided by the client.

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3 ASSESSMENT METHODOLOGY

3.1 Methodology for Conducting the Study

This HIA report was compiled by PGS for the proposed Meiringspark Extensions 10 and 11 located in the town of Klerksdorp, North West Province. The applicable maps, tables and figures are included, as stipulated in the NHRA (no 25 of 1999) and the National Environmental Management Act (NEMA) (No. 107 of 1998). The HIA process consists of three steps:

Step I – Desktop Study: A detailed archaeological and historical overview of the study area and surroundings was undertaken. This work was augmented by an assessment of reports and data contained on the South African Heritage Resources Information System (SAHRIS). Additionally, an assessment was made of the available historic topographic maps. All these desktop study components were undertaken to support the fieldwork. Archival research was also undertaken at the National Archives in Pretoria to attempt to obtain information about the history of the drive-theatre identified within the study area.

Step II – Fieldwork: The fieldwork component of the study was aimed at identifying tangible remains of archaeological, historical and heritage significance. The fieldwork was undertaken on Tuesday, 11 April 2023 by an experienced team comprising an archaeologist (Polke D. Birkholtz) and a fieldwork assistant (Derrick James). As sections of the study area had been disturbed by inter alia the construction and operation of a drive-in theatre between c. 1960 and at least 1997, the fieldwork was planned to allow the walkthroughs to be undertaken primarily in areas believed to be less disturbed. Throughout the fieldwork, hand-held GPS devices were used to record the tracklogs showing the routes followed by the archaeologists and heritage specialists on site.

Step III – The final step involved the recording and documentation of relevant heritage resources identified in the physical survey, the assessment of these resources in terms of the HIA criteria and report writing, as well as mapping and constructive recommendations.

The significance of heritage sites is based on four main criteria:

- Site integrity (i.e. primary vs. secondary context),
- Amount of deposit, range of features (e.g., stonewalling, stone tools and enclosures),
- Density of scatter (dispersed scatter)
 - Low - <10/50m²
 - Medium - 10-50/50m²
 - High - >50/50m²

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- Uniqueness; and
- Potential to answer present research questions.

Management actions and recommended mitigation, which will result in a reduction in the impact on the sites, will be expressed as follows:

- A - No further action necessary;
- B - Mapping of the site and controlled sampling required;
- C - No-go or relocate development activity position;
- D - Preserve site, or extensive data collection and mapping of the site; and
- E - Preserve site.

3.2 Site Significance

Site significance classification standards use is based on the heritage classification of s3 in the NHRA and developed for implementation keeping in mind the grading system approved by SAHRA for archaeological impact assessments. The update classification and rating system as developed by Heritage Western Cape (2021) is implemented in this report. Additionally, site significance classification standards prescribed by the Heritage Western Cape Guideline (2016), were used for the purpose of this report (**Table 2** and **Table 3**).

Table 2: Rating system for archaeological resources

Grading	Description of Resource	Examples of Possible Management Strategies	Heritage Significance
I	Heritage resources with qualities so exceptional that they are of special national significance. Current examples: Langebaanweg (West Coast Fossil Park), Cradle of Humankind	May be declared as a National Heritage Site managed by SAHRA. Specific mitigation and scientific investigation can be permitted in certain circumstances with sufficient motivation.	Highest Significance
II	Heritage resources with special qualities which make them significant, but do not fulfil the criteria for Grade I status. Current examples: Blombos, Paternoster Midden.	May be declared as a Provincial Heritage Site managed by Provincial Heritage Authority. Specific mitigation and scientific investigation can be permitted in certain circumstances with sufficient motivation.	Exceptionally High Significance
III	Heritage resources that contribute to the environmental quality or cultural significance of a larger area and fulfils one of the criteria set out in section 3(3) of the Act but that does not fulfil the criteria for Grade II status. Grade III sites may be formally protected by placement on the Heritage Register.		

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Grading	Description of Resource	Examples of Possible Management Strategies	Heritage Significance
IIIA	Such a resource must be an excellent example of its kind or must be sufficiently rare. Current examples: Varschedrift; Peers Cave; Brobartia Road Midden at Bettys Bay	Resource must be retained. Specific mitigation and scientific investigation can be permitted in certain circumstances with sufficient motivation.	High Significance
IIIB	Such a resource might have similar significances to those of a Grade III A resource, but to a lesser degree.	Resource must be retained where possible where not possible it must be fully investigated and/or mitigated.	Medium Significance
IIIC	Such a resource is of contributing significance.	Resource must be satisfactorily studied before impact. If the recording already done (such as in an HIA or permit application) is not sufficient, further recording or even mitigation may be required.	Low Significance
NCW	A resource that, after appropriate investigation, has been determined to not have enough heritage significance to be retained as part of the National Estate.	No further actions under the NHRA are required. This must be motivated by the applicant or the consultant and approved by the authority.	No research potential or other cultural significance

Table 3: Rating system for built environment resources

Grading	Description of Resource	Examples of Possible Management Strategies	Heritage Significance
I	Heritage resources with qualities so exceptional that they are of special national significance. Current examples: Robben Island	May be declared as a National Heritage Site managed by SAHRA.	Highest Significance
II	Heritage resources with special qualities which make them significant in the context of a province or region, but do not fulfil the criteria for Grade I status. Current examples: St George's Cathedral, Community House	May be declared as a Provincial Heritage Site managed by Provincial Heritage Authority.	Exceptionally High Significance
III	Such a resource contributes to the environmental quality or cultural significance of a larger area and fulfils one of the criteria set out in section 3(3) of the Act but that does not fulfil the criteria for Grade II status. Grade III sites may be formally protected by placement on the Heritage Register.		

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Grading	Description of Resource	Examples of Possible Management Strategies	Heritage Significance
IIIA	Such a resource must be an excellent example of its kind or must be sufficiently rare. These are heritage resources which are significant in the context of an area.	This grading is applied to buildings and sites that have sufficient intrinsic significance to be regarded as local heritage resources; and are significant enough to warrant that any alteration, both internal and external, is regulated. Such buildings and sites may be representative, being excellent examples of their kind, or may be rare. In either case, they should receive maximum protection at local level.	High Significance
IIIB	Such a resource might have similar significances to those of a Grade III A resource, but to a lesser degree. These are heritage resources which are significant in the context of a townscape, neighbourhood, settlement or community.	Like Grade IIIA buildings and sites, such buildings and sites may be representative, being excellent examples of their kind, or may be rare, but less so than Grade IIIA examples. They would receive less stringent protection than Grade IIIA buildings and sites at local level.	Medium Significance
IIIC	Such a resource is of contributing significance to the environs. These are heritage resources which are significant in the context of a streetscape or direct neighbourhood.	This grading is applied to buildings and/or sites whose significance is contextual, i.e. in large part due to its contribution to the character or significance of the environs. These buildings and sites should, as a consequence, only be regulated if the significance of the environs is sufficient to warrant protective measures, regardless of whether the site falls within a Conservation or Heritage Area. Internal alterations should not necessarily be regulated.	Low Significance
NCW	A resource that, after appropriate investigation, has been determined to not have enough heritage significance to be retained as part of the National Estate.	No further actions under the NHRA are required. This must be motivated by the applicant and approved by the authority. Section 34 can even be lifted by HWC for structures in this category if they are older than 60 years.	No research potential or other cultural significance

3.3 Methodology used in Determining the Significance of Environmental Impacts

The impacts will be ranked according to the methodology described below. Where possible, mitigation measures will be provided to manage impacts. In order to ensure uniformity, a standard impact assessment methodology will be utilised so that a wide range of impacts can be compared with each other. The impact assessment methodology makes provision for the assessment of

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impacts against the following criteria:

- Significance;
- Spatial scale;
- Temporal scale;
- Probability; and
- Degree of certainty.

A combined quantitative and qualitative methodology was used to describe impacts for each of the aforementioned assessment criteria. A summary of each of the qualitative descriptors along with the equivalent quantitative rating scale for each of the aforementioned criteria is given in **Table 4**.

Table 4 - Quantitative rating and equivalent descriptors for the impact assessment criteria.

RATING	SIGNIFICANCE	EXTENT SCALE	TEMPORAL SCALE
1	VERY LOW	Proposed site	Incidental
2	LOW	Study area	Short-term
3	MODERATE	Local	Medium/High-term
4	HIGH	Regional / Provincial	Long-term
5	VERY HIGH	Global / National	Permanent

A more detailed description of each of the assessment criteria is given in the following sections.

3.3.1 Significance Assessment

Significance rating (importance) of the associated impacts embraces the notion of extent and magnitude but does not always clearly define these since their importance in the rating scale is very relative. For example, the magnitude (i.e., the size) of area affected by atmospheric pollution may be extremely large (1 000 km²) but the significance of this effect is dependent on the concentration or level of pollution. If the concentration is great, the significance of the impact would be HIGH or VERY HIGH, but if it is diluted it would be VERY LOW or LOW. Similarly, if 60 ha of a grassland type are destroyed the impact would be VERY HIGH if only 100 ha of that grassland type

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were known. The impact would be VERY LOW if the grassland type was common. A more detailed description of the impact significance rating scale is given in **Table 5** below.

Table 5 - Description of the significance rating scale.

RATING		DESCRIPTION
5	Very high	Of the highest order possible within the bounds of impacts which could occur. In the case of adverse impacts: there is no possible mitigation and/or remedial activity which could offset the impact. In the case of beneficial impacts, there is no real alternative to achieving this benefit.
4	High	Impact is of substantial order within the bounds of impacts, which could occur. In the case of adverse impacts: mitigation and/or remedial activity is feasible but difficult, expensive, time-consuming or some combination of these. In the case of beneficial impacts, other means of achieving this benefit are feasible but they are more difficult, expensive, time-consuming or some combination of these.
3	Moderate	Impact is real but not substantial in relation to other impacts, which might take effect within the bounds of those which could occur. In the case of adverse impacts: mitigation and/or remedial activity are both feasible and fairly easily possible. In the case of beneficial impacts: other means of achieving this benefit are about equal in time, cost, effort, etc.
2	Low	Impact is of a low order and therefore likely to have little real effect. In the case of adverse impacts: mitigation and/or remedial activity is either easily achieved or little will be required, or both. In the case of beneficial impacts, alternative means for achieving this benefit are likely to be easier, cheaper, more effective, less time consuming, or some combination of these.
1	Very low	Impact is negligible within the bounds of impacts which could occur. In the case of adverse impacts, almost no mitigation and/or remedial activity are needed, and any minor steps which might be needed are easy, cheap, and simple. In the case of beneficial impacts, alternative means are almost all likely to be better, in one or a number of ways, than this means of achieving the benefit. Three additional categories must also be used where relevant. They are in addition to the category represented on the scale, and if used, will replace the scale.
0	No impact	There is no impact at all - not even a very low impact on a party or system.

3.3.2 Spatial Scale

The spatial scale refers to the extent of the impact i.e., will the impact be felt at the local, regional, or global scale. The spatial assessment scale is described in more detail in **Table 6**

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Table 6 - Description of the significance rating scale.

RATING		DESCRIPTION
5	Global/National	The maximum extent of any impact.
4	Regional/Provincial	The spatial scale is moderate within the bounds of impacts possible, and will be felt at a regional scale (District Municipality to Provincial Level).
3	Local	The impact will affect an area up to 10 km from the proposed site.
2	Study Area	The impact will affect an area not exceeding the property.
1	Site	The impact will affect an area no bigger than the site.

3.3.3 Duration Scale

In order to accurately describe the impact, it is necessary to understand the duration and persistence of an impact in the environment. The temporal scale is rated according to criteria set out in **Table 7**.

Table 7 - Description of the temporal rating scale.

RATING		DESCRIPTION
1	Incidental	The impact will be limited to isolated incidences that are expected to occur very sporadically.
2	Short-term	The environmental impact identified will operate for the duration of the construction phase or a period of less than 5 years, whichever is the greater.
3	Medium/High term	The environmental impact identified will operate for the duration of life of facility.
4	Long term	The environmental impact identified will operate beyond the life of operation.
5	Permanent	The environmental impact will be permanent.

3.3.4 Degree of Probability

Probability or likelihood of an impact occurring will be described as shown in **Table 8** below.

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Table 8 - Description of the degree of probability of an impact occurring.

RATING	DESCRIPTION
1	Practically impossible
2	Unlikely
3	Could happen
4	Very Likely
5	It's going to happen / has occurred

3.3.5 Degree of Certainty

As with all studies, it is not possible to be 100% certain of all facts, and for this reason a standard “degree of certainty” scale is used as discussed in **Table 9**. The level of detail for specialist studies is determined according to the degree of certainty required for decision-making. The impacts are discussed in terms of affected parties or environmental components.

Table 9 - Description of the degree of certainty rating scale.

RATING	DESCRIPTION
Definite	More than 90% sure of a particular fact.
Probable	Between 70 and 90% sure of a particular fact, or of the likelihood of that impact occurring.
Possible	Between 40 and 70% sure of a particular fact or of the likelihood of an impact occurring.
Unsure	Less than 40% sure of a particular fact or the likelihood of an impact occurring.
Can't know	The consultant believes an assessment is not possible even with additional research.
Don't know	The consultant cannot, or is unwilling, to make an assessment given available information.

3.3.6 Quantative Description of Impacts

To allow for impacts to be described in a quantitative manner in addition to the qualitative

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description given above, a rating scale of between 1 and 5 was used for each of the assessment criteria. Thus, the total value of the impact is described as the function of significance, spatial and temporal scale as described below:

$$\text{Impact Risk} = \frac{(\text{Significance} + \text{Spatial} + \text{Temporal})}{3} \times \frac{\text{Probability}}{5}$$

An example of how this rating scale is applied is shown in **Table 10** below.

Table 10 - Example of Rating Scale.

Impact	Significance	Spatial Scale	Temporal Scale	Probability	Rating
	LOW	Local	Medium/High-term	Could Happen	
Impact to air	2	3	3	3	1.6

Note: The significance, spatial and temporal scales are added to give a total of 8, that is divided by 3 to give a criteria rating of 2,67. The probability (3) is divided by 5 to give a probability rating of 0,6. The criteria rating of 2,67 is then multiplied by the probability rating (0,6) to give the final rating of 1,6.

The impact risk is classified according to five classes as described in the **Table 11** below.

Table 11 - Impact Risk Classes.

RATING	IMPACT CLASS	DESCRIPTION
0.1 – 1.0	1	Very Low
1.1 – 2.0	2	Low
2.1 – 3.0	3	Moderate
3.1 – 4.0	4	High
4.1 – 5.0	5	Very High

Therefore, with reference to the example used for air quality above, an impact rating of 1.6 will fall in the Impact Class 2, which will be considered to be a low impact.

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4 CURRENT STATUS QUO

4.1 Site Description

The study area is located within the town of Klerksdorp in the North West Province. As a result, its immediate surroundings are characterised by residential areas forming part of the suburb of Meiringspark.

The project area itself is partially disturbed by the remains of an old drive-in theatre. Poorly preserved remains of the old drive-in theatre that can still be seen within the study area include tarred roads, ruins of old buildings and a series of terraced and tarred ramps where the vehicles used to park while watching movies.

The project area is overgrown with dense vegetation. This vegetation includes grass, bushes and various alien invasive species.

Refer to **Figure 4** to Error! Reference source not found. below.



Figure 4 – General view of the study area. The dense vegetation characterising the project area is evident. The vegetation from this section is primarily comprised of grass.

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Figure 5 – Another general view of the study area.



Figure 6 – The terraced ramps depicted here formed part of the old drive-in theatre that was located within the study area. These ramps allowed attendees to park their vehicles against and on the ramps thereby raising the front of the vehicles and improving visibility of the screen that the movies were projected on.

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4.2 Heritage Desktop

4.2.1 Archaeological and Historical overview of the study area and surrounding landscape

DATE	DESCRIPTION
The Study Area and Surroundings during the Stone Age	
The archaeological literature does not contain much information on the Stone Age archaeology of this area. It is likely that this reflects a lack of research rather than the fact that Stone Age sites are not found in this area.	
2.5 million to 250 000 years ago	<p>The Earlier Stone Age (ESA) is the first and oldest phase identified in South Africa's archaeological history and comprises two technological phases. The earliest of these is known as Oldowan and is associated with crude flakes and hammer stones. It dates to approximately 2 million years ago. The second technological phase is the Acheulian and comprises more refined and better made stone artefacts such as the cleaver and bifacial hand axe. The Acheulian dates to approximately 1.5 million years ago.</p> <p>No ESA sites are known from the vicinity of the study area.</p>
250 000 to 40 000 years ago	<p>The Middle Stone Age (MSA) is the second oldest phase identified in South Africa's archaeological history. This phase is associated with flakes, points and blades manufactured by means of the so-called 'prepared core' technique.</p> <p>No MSA sites are known from the vicinity of the study area.</p>
40 000 years ago to the historic past	<p>The Later Stone Age (LSA) is the third archaeological phase identified and is associated with an abundance of very small artefacts known as microliths. A well-known feature of the Later Stone Age is rock art in the form of rock paintings and engravings.</p>
The Study Area and Surroundings during the Iron Age	
The arrival of early farming communities during the first Millenium heralded in the start of the Iron Age for South Africa. The Iron Age is that period in South Africa's archaeological history associated with pre-colonial farming communities who practised cultivation and pastoralist farming activities, metalworking, cultural customs such as lobola and whose settlement layouts show the tangible representation of the significance of cattle (known as the Central Cattle Pattern) (Huffman, 2007). The Southern African Iron Age can be divided into an Early Iron Age (AD 200 – AD 900), Middle Iron Age (AD 900 – AD 1300) and Late Iron Age (AD 1300 – AD 1840) (Huffman, 2007).	
AD 1500 - AD 1700	<p>The Olifantspoort facies of the Moloko Branch of the Urewe Ceramic Tradition is the first Iron Age facies to be identified within the surroundings of the study area. The key features of the decoration used on the ceramics from this pottery facies include multiple bands of fine stamping or narrow incision separated by colour (Huffman, 2007).</p>
AD 1700 – AD 1840	<p>The Thabeng facies of the Moloko Branch of the Urewe Tradition is the next Iron Age period to be identified within the surroundings of the study</p>

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	area. The decoration on the ceramics from this facies is characterised by incised triangles, coloured chevrons and arcades (Huffman, 2007).
AD 1700 – AD 1840	The Buispoort facies of the Moloko branch of the Urewe Ceramic Tradition is the next phase to be identified within the surroundings. The key features on the decoration include rim notching, broadly incised chevrons, and white bands, all with red ochre (Huffman, 2007).
1823 - 1827	During the Difaqane, the Khumalo Ndebele (or Matabele) of Mzilikazi established themselves along the banks of the Vaal River (Bergh, 1999). In c. 1827 the Matabele moved further north and settled along the Magaliesberg Mountain. In 1832, they settled along the Marico River.
The Study Area and Surroundings during the Historical Period	
<p>The Historical Period within the study area and surroundings commenced with the arrival of newcomers to this area. The first arrivals would almost certainly have been travellers, traders, missionaries, hunters, and fortune seekers. However, with time, this initial trickle was replaced by a mass flood of white immigrants during the 1830s, when a mass migration of roughly 2 540 Afrikaner families (comprising approximately 12 000 individuals) from the frontier zone of the Cape Colony to the interior of Southern Africa took place. The people who took part in this Great Trek were later named Voortrekkers (Visagie, 2011). The general surroundings of the study area underwent significant changes during this time, including the establishment of towns such as Klerksdorp and the commencement and expansion of gold mining activities.</p>	
1836 - 1840	The first Voortrekkers started crossing over the Vaal River (Bergh, 1999) and in terms of the surroundings of the study area established themselves along the banks of the Schoonspruit during this time. One of the first Voortrekkers to arrive in the area was C.M. du Plooy. Shortly thereafter a group consisting of twelve families under the leadership of H.J. van der Merwe also established themselves in the general vicinity (Du Plessis, 1952).
1839	The district of Potchefstroom was established in this year (Bergh, 1999). The study area fell within this district at the time.
1840s to 1850s	<p>During the early 1840s several Voortrekker farms were surveyed and established in the general surroundings of the study area. For example, the farms Hartebeestfontein (known at the time as Stinkhoutboom) and Buffelsfontein were inspected on the same day by G.J. Kruger on 16 December 1841 (National Archives, RAK, 2875 & 2876).</p> <p>Although several other farms from the surroundings of the study area would have been established during the remainder of the 1840s, it is known that several more farms were established from 1850 onwards. For example, the farm Modderfontein was inspected on 20 December 1850 by J.F. Dreyer, whereas the farm Stilfontein was inspected on 2 May 1851 by the same person (National Archives, RAK, 2875).</p> <p>Both individuals responsible for the inspection of the above-mentioned farms, namely G.J. Kruger and J.F. Dreyer, must have held official positions during this time. During later years, both Kruger and Dreyer became the Commandant-General of the Zuid-Afrikaansche Republiek. Dreyer was appointed to this position in March 1856 (Theal, 2010).</p>

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1850	Although the exact date for the establishment of the town of Klerksdorp is not known, the first depiction of a town on the banks of the Schoonspruit was on an archival map dated to 1850.
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Figure 7 – Early photograph of Klerksdorp's Oudorp (National Archives, Photographs, 16342).

1865	Messrs. James Taylor and Thomas Leask established the first business in Klerksdorp in this year, namely the town's first shop.
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Figure 8 – The shop that Taylor and Leask established in Klerksdorp (Marx, 1987:15).

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November 1885	<p>During this time Martinus Gerhardus Jansen van Vuuren of the farm Ysterspruit wrote a letter to President S.J.P. Kruger indicating that he had discovered gold on his farm. He also submitted samples of what he had discovered with the letter for analysis. The government of the Zuid-Afrikaansche Republiek wrote back to state that the samples that he submitted were rich in gold and silver (Marx, 1987). This discovery at Ysterspruit can therefore be seen as the first discovery of gold in the neighbourhood of Klerksdorp.</p>
<div style="display: flex; align-items: center;">  <div style="margin-left: 20px;"> <p><i>Figure 9</i></p> <p><i>Marthinus Gerhardus Jansen van Rensburg of the farm Ysterspruit (Marx, 1987:17).</i></p> </div> </div>	
1887	<p>The second important discovery of gold in the Klerksdorp area, and the discovery that is more commonly known, is the gold discovered by A.P. Roos on a low hill known as Town or Railway Hill (Guest, 1938).</p>
1887 - 1888	<p>During this time Thomas Leask was prospecting for gold on the farms Roodepoort (also known as Strathmore) and Nooitgedacht. He found the results so promising that he ordered a five-stamp mill from England and erected it on the banks of the Schoonspruit, not far from the homestead on Strathmore. During these early years this mill was used by various mining companies from the surrounding area (Guest, 1938).</p>
11 July 1887	<p>When news of these finds became public, it was not long before several farms in the direct surroundings of Klerksdorp were proclaimed as public diggings with subsequent gold mines eventually established. The first of these proclamations took place for the farm Rietkuil on 11 July 1887 and the Klerksdorp Main Reef Gold Mining Company was later established there (Guest, 1938).</p>

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2 July 1888	The Commonage of Klerksdorp (of which this study area formed part) was proclaimed a public digging on 2 July 1888 (Guest, 1938).
Late 1880s to 1895	<p>At least seven early gold mines are recorded by Guest (1938) for the Klerksdorp Commonage. These seven gold mines will be listed below. The respective years within which these mines were established, are also provided. These seven early gold mines associated with the Klerksdorp Commonage, are the Ada May Rose Gold Mining Company (late 1880s), the Klerksdorp Commonage Gold Estates Limited (1888), Southleigh Mines (1895), Southern Klerksdorp Limited (1895), Niekerk Klerksdorp Gold Mining Company Limited (1895), Klerksdorp Proprietary Mines Limited (1895) and the Klerksdorp Extended Limited. This latter mine was established in 1902.</p> <p>The positions of these gold mines are depicted in the image below and show that they were all located east and south-east of Klerksdorp. As a result, these early mines were not located in proximity to the study area.</p>

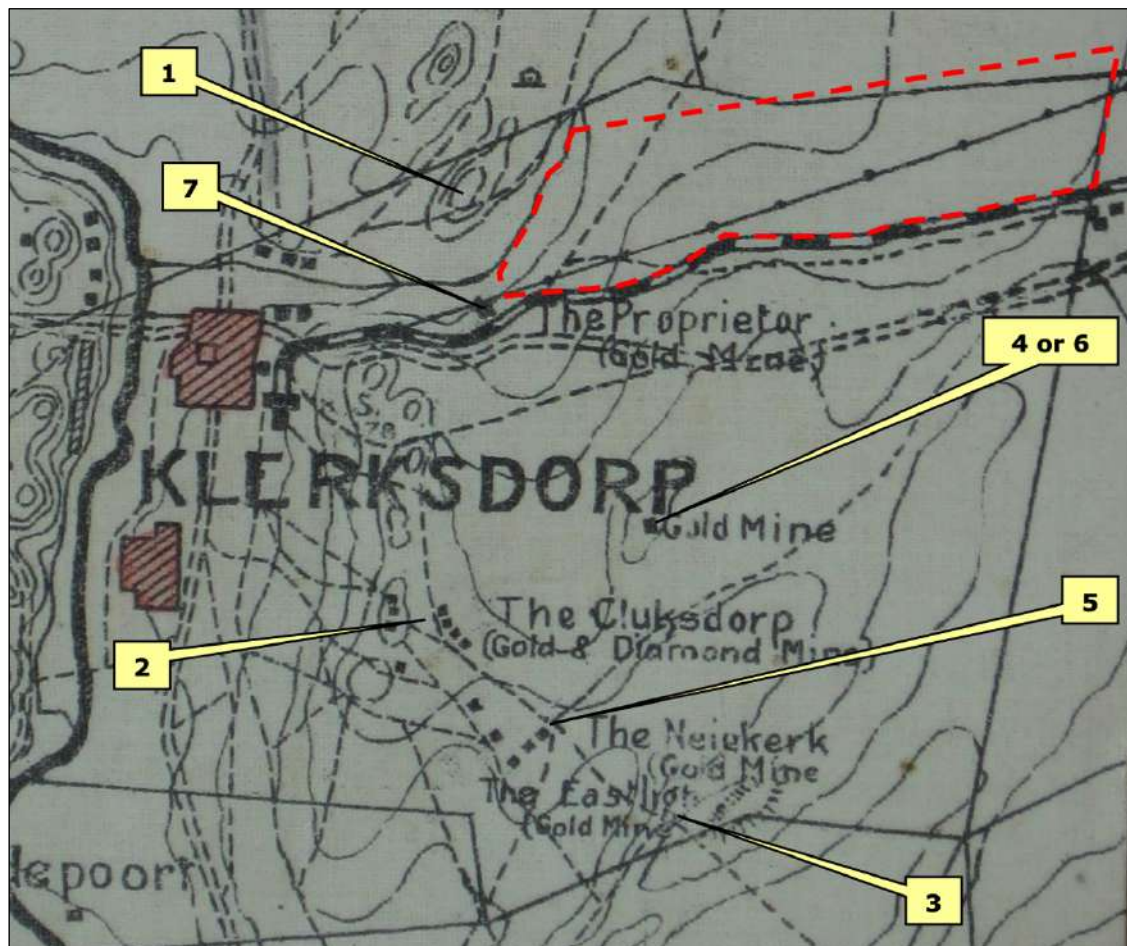


Figure 10 – Section of the Klerksdorp sheet of the Major Jackson Series, which dates to May 1902. The positions of the seven early mining properties discussed in the text are indicated. These are the (1) Ada May Rose Gold Mining Company, (2) Klerksdorp Commonage Gold Estates Limited, (3) Southleigh Mines, (4) Southern Klerksdorp Limited, (5) Niekerk Klerksdorp Gold Mining Company, (6) Klerksdorp Extended Limited and the (7) Klerksdorp Proprietary Mines Limited.

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1897	<p>The Nederlandsche Zuid-Afrikaansche Spoorweg Maatschappij (NZASM) completed the so-called South-Western Line in 1897 thereby linking the Witwatersrand with Klerksdorp. The line was opened to traffic in August 1897 and comprised the following stations: Randfontein, Bank, Welverdiend, Frederikstad, Potchefstroom, Machavie, Koekemoer and Klerksdorp (De Jong et.al., 1988).</p>
<p>The Study Area and Surroundings during the South African War</p>	
<p>On 11 October 1899 war broke out between Britain and the two Boer republics of the Orange Free State and Transvaal (Zuid-Afrikaansche Republiek). The war ravaged large parts of South Africa for almost three years.</p>	
1899 - 1902	<p>At the onset of hostilities, the town of Klerksdorp was naturally in Boer hands. However, during the subsequent months, the town would change hands between the two warring sides. On 8 June 1900, for example, it was occupied by Captain Lambart and a small British force. Less than two months later, on 25 July 1900, the town was retaken by a Boer Commando under General Liebenberg. A few months later, on 16 November 1900, Klerksdorp was occupied again by the British, and in this instance by a force under the command of General Douglas (Marx, 1987).</p> <p>The significance of the Vaal River as a natural barrier for the movement of troops resulted in the drifts along the river becoming points of strategic importance during the war. The side which could control the drifts could naturally also control the movement of their enemies. This was especially true for the British Army who wanted to control the mobility of the Boer Commandos. Several drifts are known to have existed in the along sections of the Vaal River located closest to Klerksdorp, including Vermaas Drift, Wolmaran's Drift and Kromdraai Drift.</p> <p>It is known that on 2 August 1900 Colonel Younghusband with the 3rd Battalion Imperial Yeomanry and a section of the Northamptonshire Regiment were ordered to Vermaas Drift. This force stayed at the drift until 6 August 1900 when they were ordered to join the main body further to the east (Amery, 1909). Other references to these drifts during the war years include a report in the Sydney Morning Herald of 15 December 1900 that Privates F.W. Mohr and A. Moran of the New South Wales Regiment of the Imperial Bushmen went missing after a skirmish at Wolmaran's Drift on (or before) 14 December 1900. Both individuals later returned to their unit (The Advertiser, 19 December 1900).</p> <p>Between December 1900 and March 1901, the 58th Northamptonshire Regiment was placed in defensive positions around Klerksdorp. While its headquarters comprising A and G Companies under the command of Colonel H.C. Denny were at Klerksdorp, D and E Companies under the command of Captains Skinner and Ripley were placed at Coal Mine Bridge (at present-day Orkney) with F and H Companies under the command of Major Fawcett positioned at Koekemoer Station, B Company commanded by Captain A.A. Lloyd at Wolmaran's Drift and C Company under the command of Captain C.S. Pritchard at Vermaas Drift (Gurney and Jervois, 1935).</p> <p>On 29 January 1901, a Boer attack took place on Klerksdorp. The attack was repulsed by the Northamptonshire regiment (Gurney and Jervois,</p>

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	<p>1935). Based on the deployment of the 58th Northamptonshire Regiment at and around Klerksdorp as outlined above, it seems likely for A and G Companies under the command of Colonel H.C. Denny to have been responsible for the successful defence of the town. For the remainder of the war, the town of Klerksdorp would remain in British hands (Marx, 1987).</p> <p>On 25 February 1902 a British convoy commanded by Lieutenant-Colonel Anderson was attacked at Ysterspruit by Boer forces under the command of General De la Rey. The Boer attack was successful and resulted in casualties of 187 men on the side of the British and 51 casualties on the side of the Boers. These numbers include those killed, wounded, and taken prisoner. General De la Rey's men also took 170 horses, several hundred rifles and half a million rounds of ammunition from the defeated British convoy (www.battletoursza.com). The site of the battle was located approximately 25km south-west of the study area.</p>
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Figure 11

Captain Arthur Athelwold Lloyd (left) and Major Charles Steward Pritchard (below) were the respective commanding officers at Wolmaran's Drift and Vermaas Drift between December 1900 and March 1901 (Northampton Museum Service).



9 & 10 April 1902	<p>On 9 and 10 April 1902 representatives of the Transvaal Republic (Z.A.R.) and the Republic of the Orange Free State met on the banks of the Schoonspruit at Klerksdorp. The Transvaal delegation comprising Vice-President Schalk Burger, State Secretary F.W. Reitz, Commandant-General Louis Botha, General Koos de la Rey, General L.J. Meyer and General J.C. Krogh were accommodated in the Nieuwe Dorp. The Free State delegation comprising President Steyn, Commandant-General Christiaan de Wet, State Secretary J.W.C. Brebner, General J.B.M. Hertzog and General C.H. Olivier was accommodated in the Oude Dorp. The meeting was conducted with the knowledge of the British High Command. The aim of the meeting was</p>
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for the representatives of the two Boer Republics to discuss the status of the war and to establish whether peace should be negotiated with the British (Raath, 2007). The meeting was the first step toward the final peace settlement on 31 May 1902 at Vereeniging.



Figure 12 – This photograph was taken during the peace negotiations at Vereeniging and show three members of the Free State delegation at the Klerksdorp meeting of April 1902 namely (from left to right) State Secretary J.W.C. Brebner, Commandant-General C.R. de Wet and General J.B.M. Hertzog (Van Schoor, 2007).

The Study Area and Surroundings during the Twentieth Century

The general surroundings of the study area underwent significant changes and development during the twentieth century, including the further establishment and development of gold mines as well as extensive development of the town of Klerksdorp.

21 December 1914

During the early years of mining in the area, the mining of alluvial diamonds was just as important as early gold mining activities and became even more so during the second decade of the twentieth century. On 17 November 1911, for example, the part of Goedgenoeg farm located between Dean Station and Vaalsig was proclaimed alluvial diggings. The Goedgenoeg diggings resulted in the extraction of a total of 94, 75 carats of diamonds to the value of just over £355 during 1914. On 21 December 1914 the so-called Eastleigh diggings were proclaimed. Although the reference Orkney Diary (1990) indicates that these diggings were located west of the Schoonspruit, on a government owned portion of the farm Goedgenoeg, Marx (1987) in turn states that the Easleigh diggings were located on both sides of the Klerksdorp-

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	Orkney road, on land formerly owned by Eastleigh Mines. Initially only 332 claim licences were issued in terms of the Eastleigh diggings, but with the proclamation of the north-eastern section of Goedgenoeg, approximately 1 000 alluvial diamond miners were active in the area. Although these alluvial mining activities continued in earnest for the next number of decades, by 1937 its significance waned and the mining of gold became increasingly significant.
--	--



Figure 13 – Diamond miners at what is believed to be the Eastleigh Diggings (Marx, 1987).

1935	The Klerksdorp District was established and the study area now fell within this district (Bergh, 1999).
18 March 1940	The town of Orkney was officially proclaimed on 18 March 1940 by the Administrator of the Transvaal, Mr. J.J. Pienaar. This proclamation was subsequently also published in the Government Gazette.
c. 1945	During the latter stages of the Second World War (1939 – 1945) the American and British scientists working on the production of nuclear weapons as part of the Manhattan Project realised that although they were able to obtain enough uranium for their immediate uses from places such as the Belgian Congo and Canada, more uranium would be required from other places as well (Groves, 1962). One of the scientists on the Manhattan Project was Professor G.W. Bain of the Amherst College, Massachusetts (Jones, 1995). During this time Professor Bain remembered that he had ore samples from the Witwatersrand in his private collection which he had collected during a visit to South Africa in 1941. He conducted tests on these samples and to his excitement realised that they emitted beta rays which in turn meant that the Witwatersrand gold mines could become another source for uranium (Jones, 1995) (Groves, 1962). This was the start of the uranium industry

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	<p>of South Africa and by 1959 the country had become a major world producer in uranium (Bhushan & Katyal, 2002).</p> <p>A number of gold mines in the Klerksdorp area that were established during the 1950s, such as Buffelsfontein and Hartebeestfontein, were significantly associated with the production and export of uranium.</p> <p>It seems evident that the industrial area and suburb of Uraniaville, which is located immediately south of the study area, was given this name due to the production of uranium in the surroundings of Klerksdorp at the time.</p>
30 May 1950 to 11 July 1957	<p>The suburb of Meiringspark was proclaimed on 30 May 1950 on Portion 332 of the farm Elandsheuvel No. 54 (National Archives, CDB, 2712, PB4/2/2/848). On 11 July 1957, Meiringspark Extension 1 was approved for establishment on Portion 11 and J of the farm Elandsheuvel No. 54 (National Archives, CDB, 3093, PB4/2/2/1579). Meiringspark Extension 2 was approved a few years later.</p> <p>The suburb of Meiringspark is located immediately north of the study area. Additionally, the drive-In cinema that was located within the study area, is also named the Meiringspark Drive-In Cinema. The history of the drive-in cinema is provided below.</p>

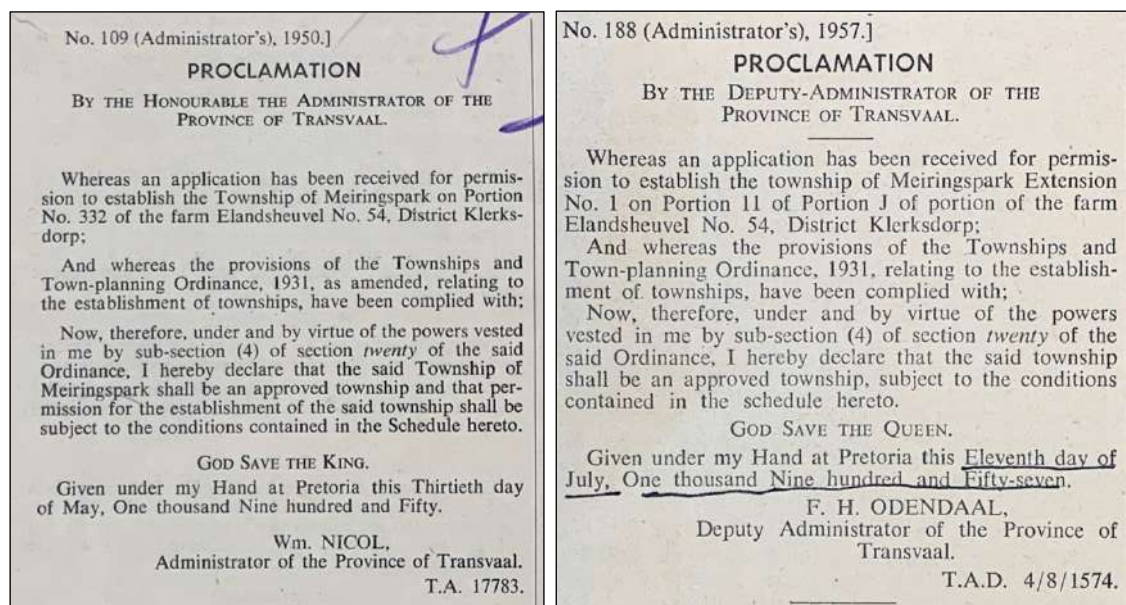


Figure 14 – These photographs depict section of the proclamation by the Administrator of the Province of Transvaal for the approval of the suburbs of Meiringspark (National Archives, CDB, 2712, PB4/2/2/848) and Meiringspark Extension 1 (National Archives, CDB, 3093, PB4/2/2/1579),

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4.2.2 *National and Provincial Heritage Resources*

No National Heritage Resources are known to be located within the study area, the town of Klerksdorp or even its surroundings. In fact, the nearest National Heritage Resource to the study area appears to be the grave of JB Marks in the town of Ventersdorp. John “Beaver” Marks was a political activist and trade unionist, Chairperson of the South African Communist Party (1962 – 1972) and Member of the National Executive Committee of the ANC (www.sahra.org.za). This site is located approximately 63km north-east of the study area.

While no Provincial Heritage Resources are known from the study area, the following such Provincial Heritage Resources are known from the wider surroundings of the study area:

- Fountain Villa

This site comprises the house known as Fountain Villa and the associated historic structures and property that it is located on. The property is located at 21 Hendrik Potgieter Street in Klerksdorp.

The site was originally declared a National Monument in terms of the National Monuments Act (Act 28 of 1969) on 22 June 1990.

The Fountain Villa site is located 2.6km east of the closest point along the boundary of the study area.

- Wood and Iron Houses

The site comprises two historic corrugated iron houses located at 13 and 15 Convent Avenue in Klerksdorp.

The site was originally declared a National Monument in terms of the National Monuments Act (Act 28 of 1969) on 22 February 1991 (www.sahra.org.za).

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4.2.3 Historical maps

The examination of historical data and cartographic resources represents a critical tool for locating and identifying heritage resources and in determining the historical and cultural context of the study area. Relevant topographic maps were studied to identify structures, possible burial grounds or archaeological sites present in the footprint area.

The study area is located on within the area covered by the 2626DC topographic map. The first and second editions of this map sheet will be used for the purposes of this study.

First Edition of the 2626DC Topographic Map

Figure 15 below depicts a section of the First Edition of the 2626DC Topographical Map Sheet. This sheet was based on aerial photography undertaken in 1945, was surveyed in 1953 and drawn in 1957 by the Trigonometrical Survey Office. Using the overlay function of Google Earth, an overlay was made of the study area over this topographic sheet.

The following observations can be made of this depiction:

- No possible heritage resources are depicted within the study area or in its proximity.
- Scheepers Road, which is currently located north of the study area, is not yet shown. The main road to Wolmaransstad and Kimberley is depicted along the southern boundary of the study area.
- The study area and its immediate surroundings appear to have comprised undeveloped land. The construction of the suburb of Meiringspark also does not appear to have extended to any close distance to the study area at the time that this map was surveyed. As indicated above, this suburb was officially approved in 1950.

Second Edition of the 2626DC Topographic Map

Figure 16 below depicts a section of the Second Edition of the 2626DC Topographical Map Sheet. This sheet was based on aerial photography undertaken in 1966, was surveyed in 1968 and drawn in 1969 by the Trigonometrical Survey Office.

Using the overlay function of Google Earth, an overlay was made of the study area over this topographic sheet. The following observations can be made of this depiction.

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- The drive-in cinema located partially within the study area is depicted on this map. It is shown to at least consist of two roads, two buildings and a rectangular fence. The depiction of the drive-in cinema on this map indicates that it was constructed between 1953 and 1968.
- A telephone or telegraph line is shown to run along the eastern end of the study area.
- Scheepers Road, which is currently located north of the study area, is shown on this map. Additionally, the main road to Wolmaranstad and Kimberley is again depicted along the southern boundary of the study area.
- While the study area was used for a drive-in theatre, its immediate surroundings appear to have already been characterised by residential development. By the time that this map was compiled, the suburb of Meiringspark already extended partially along the northern boundary of the study area.

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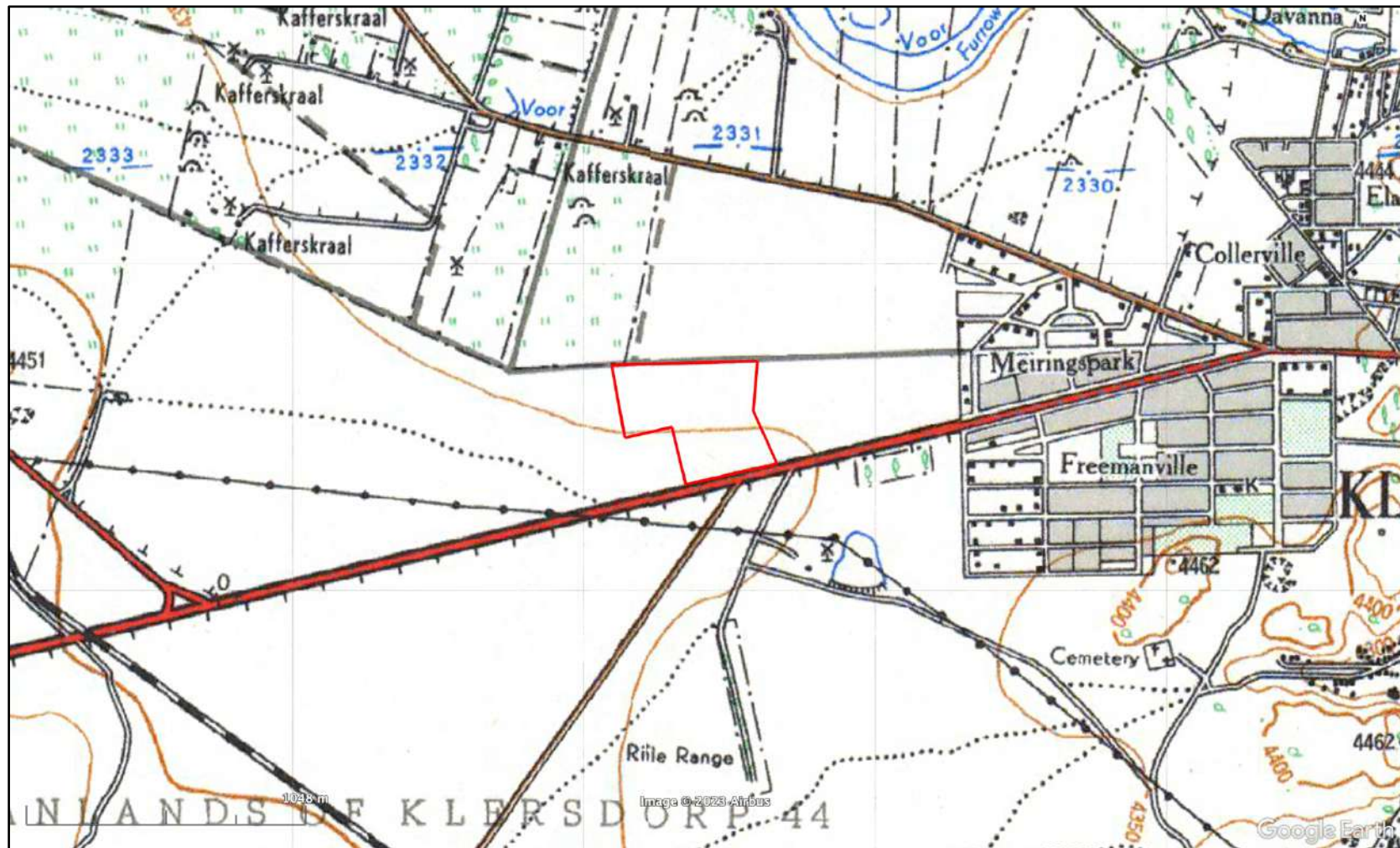


Figure 15 – The study area and its surroundings as depicted on the First Edition of the 2626DC Topographical Sheet. The study area boundaries are depicted in red line.

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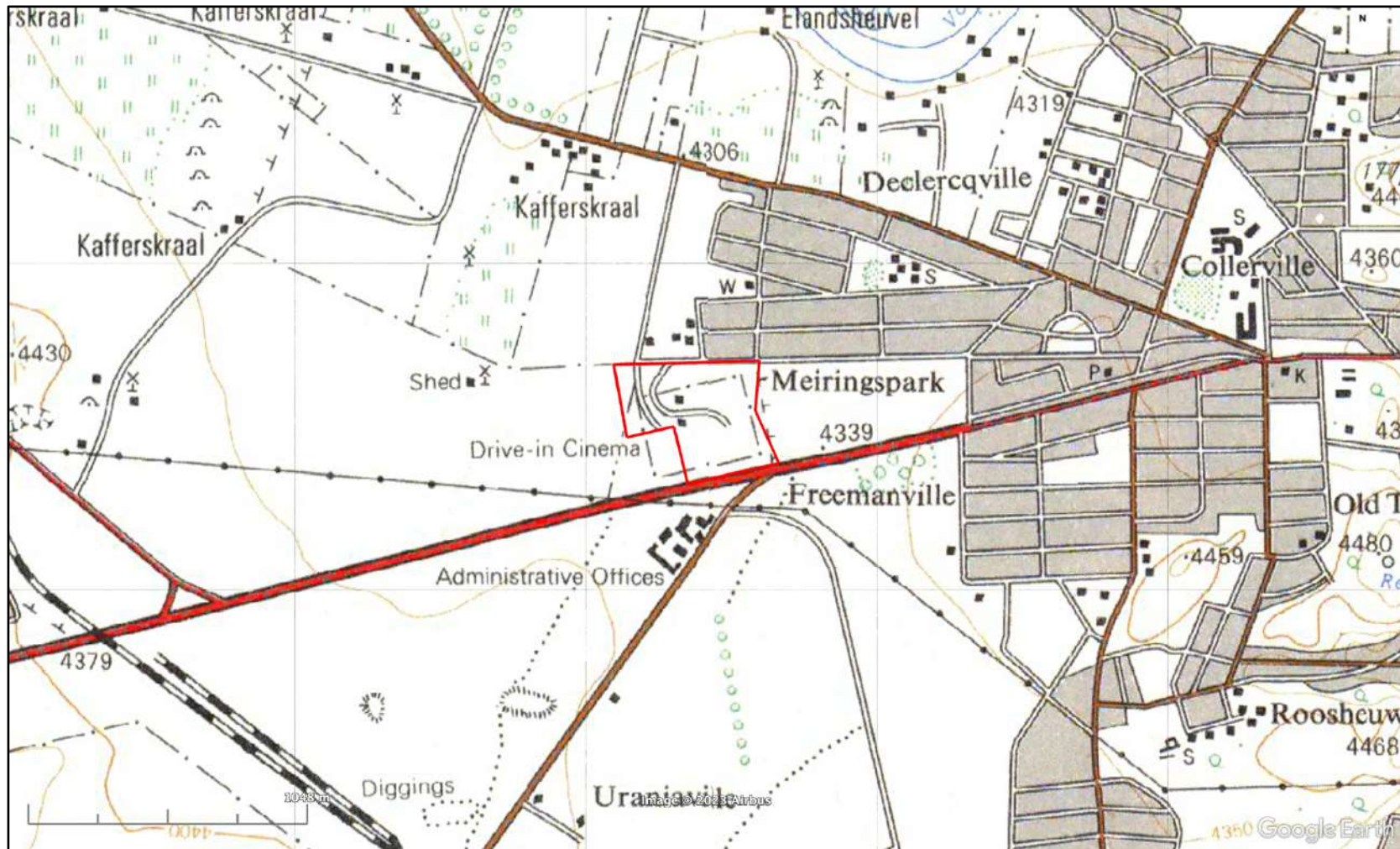


Figure 16 – The study area and its surroundings as depicted on the Second Edition of the 2626DC Topographical Sheet. The study area boundaries are depicted in red line.

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4.2.4 Previous heritage impact assessment reports from the study area and surroundings

A search of the SAHRIS database revealed that several previous archaeological and heritage reports had been undertaken within the surroundings of the study area. In each case, the results of each study are shown in bold. These previous studies are listed in chronological order below:

- Birkholtz, P.D. 2010. *Phase 1 Heritage Impact Assessment for the Proposed Township Establishment on the Farm Isago@12 564-IP, located East of Klerksdorp, City of Matlosana Municipality, North West Province*. Unpublished report for Ecologic Afrika. **Nine heritage sites were identified, including one historic homestead, three historic farm worker dwellings, two possible graves, two historic farming-related structures and one recent farming-related structure.**
- Pelser, A. 2012a. *Report on a Phase 1 HIA for the Proposed Matlosana Estate & Uraniaville Ext 2 Developments on Various Portions of Portion 1 of the Farm Town & Townlands of Klerksdorp 424IP in Klerksdorp, North West Province*. Unpublished report for Maxim Planning Solutions (Pty) Ltd. **Recent ruins of farm worker dwellings and farming related structures were identified.**
- Pelser, A. 2012b. *Report on a Phase 1 HIA for the Proposed Alabama Extension 4 Township Development on the Remaining Extent of Portion 1 of the Farm Town & Townlands of Klerksdorp 424IP, near Klerksdorp (Matlosana), North West Province*. Unpublished report for Maxim Planning Solutions (Pty) Ltd. **A Stone Age site (MSA/LSA) was identified.**
- Birkholtz, P.D. 2014. *Heritage Impact Assessment for the Proposed Isago Eskom Line. Proposed Eskom Line on Sections of Portions 36 and 60 of the Farm Palmietfontein 403 IP, City of Matlosana Local Municipality, North West Province*. Unpublished report for Anglo Saxon Group and Eskom. **Two heritage sites were identified within the study area, namely one cemetery and one possible grave. A third heritage site comprising a cemetery was identified outside the study area, but in the general vicinity of the proposed development.**
- Küsel, U. 2016. *Phase 1 Cultural Heritage Resources Impact Assessment for the Proposed Town Development Alabama Extension 6 and the Rezoning of Park Erf 19613, Jouberton Extension 19. The Proposed Township Establishment is located on the Farm Townlands of Klerksdorp 424 IP, North West Province*. Unpublished Report for AB Enviro Consult cc. **No heritage resources were identified.**

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4.2.5 Heritage screening

A screening report was compiled by the Department of Environmental Affairs National Web-based Environmental Screening Tool as required by Regulation 16(1)(v) of the Environmental Impact Assessment Regulations 2014, as amended. This screening was undertaken by the client, namely Ecologic Afrika.

According to the screening report, the study area and surroundings have a Low Sensitivity in terms of archaeology and cultural heritage (**Figure 17**). No archaeological resources were identified during the fieldwork. The study did reveal the poorly preserved remains of an old drive-in theatre located within the study.

In terms of palaeontology, the same screening report compiled by the client indicates that the study area and surroundings have a Medium Sensitivity (**Figure 18**). As indicated elsewhere, palaeontology did not form part of the scope of work for this study.



Figure 17 - Screening tool map indicating a low combined sensitivity rating for archaeology and cultural heritage for the study area. This image was taken from the screening report compiled by Ecologic Afrika.

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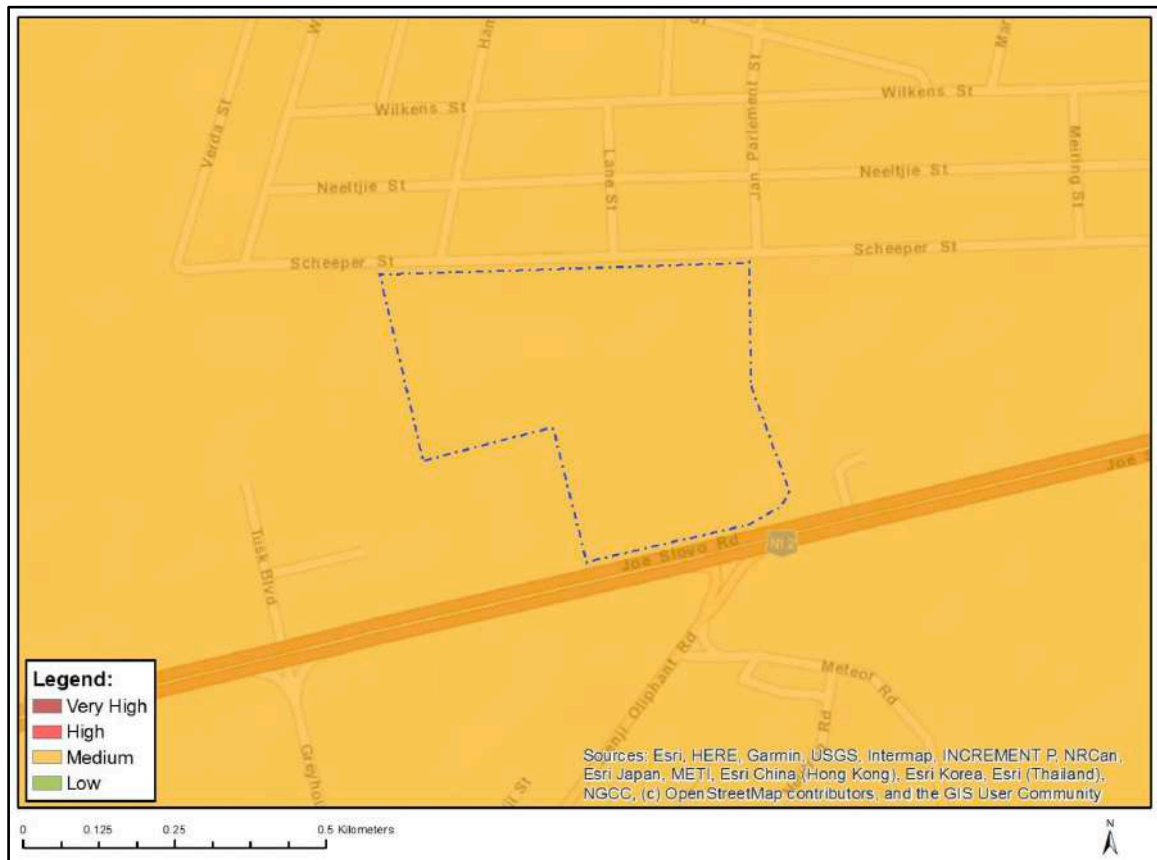


Figure 18 - Screening tool map indicating a medium sensitivity rating for palaeontology for the study area. This image was taken from the screening report compiled by Ecologic Afrika.

4.2.6 History of the Meiringspark Drive-In Theatre

During the fieldwork, the poorly preserved remains of an old drive-in theatre was identified (refer site **MEK 1**). Limited archival research was undertaken to attempt to establish the age and history of the drive-in theatre. The results of this research will be presented in this section.

During 1957 the Klerksdorp Town Council advertised its intension to lease a portion of the farm Townlands of Klerksdorp for the purposes of a drive-in theatre. The portion of the farm proposed for this was 10 morgen in extent, and is believed to have been partially located within the present study area. Interestingly, in a letter written by the Klerksdorp Town Clerk on 31 July 1957, mention is made of two sites, not one, located on this farm and that the Town Council wanted to lease for the purposes of drive-in theatres.

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No objections were received in response to the advertisement of 1957. However, before the lease could be put up by public auction, the Town Council was interdicted by Flamwood Estates from proceeding with the intended lease. It is understood that this company wanted to also develop a drive-in theatre on the eastern side of Klerksdorp. The Klerksdorp Town Council appealed the interdict, and the Appeal Court found in favour of the Town Council during early 1959.

In a document dated 27 July 1959, it is indicated by the Director of Local Government that the Administrator of the Transvaal Provincial Administration had approved the application of the Klerksdorp Town Council for the lease of the portion of the farm Townlands of Klerksdorp for the purposes of a drive-in theatre. This is the same portion of the farm that is partially located within the study area.

The next step in the process was for a public auction to be held at the end of July 1959. A short while before the intended public auction, on 27 July 1959, a petition signed by several residents of Meiringspark was submitted to the Klerksdorp Town Council. The signatories of the petition objected against the construction of access roads to the proposed drive-in theatre from the suburb of Meiringspark and requested the Klerksdorp Town Council to rather build an access road from, what it refers to, as the tarred main road to Kimberley.

On Friday, 31 July 1959 at 11 am the morning, the public auction for the proposed lease of the property described above and intended for the purposes of the construction of a drive-in theatre was undertaken. The published lease agreement indicated that the monthly lease fee for the property would be £70 per month and that the period of the lease was to be 10 years. Once the lease agreement elapsed, the successful lessee would have the opportunity to extend the lease by another 10 years and so forth. This was naturally based on certain preconditions. Additionally, the published lease agreement indicated that the lease agreement was to come into effect by 1 November 1959.

It is not known how many applications were received in terms of the public auction. However, already on 15 July 1959, a letter was sent by the Klerksdorp Town Clerk to a Mr Holliday representing the company Fox Theatres Limited. This letter appears to represent early discussions regarding the proposed lease of the said portion of the farm for the purposes of a drive-in theatre. Subsequent to this document, and specifically during August and September 1959, extensive correspondence took place between the Klerksdorp Town Council and representatives of the companies Fox Theatres South Africa (Pty) Ltd, Cinema Holdings Limited, Amsterdam Investments (Pty) Ltd and African Consolidated Theatres Limited. In a letter written by the secretary for Fox

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Theatres South Africa (Pty) Ltd and dated 7 August 1959, it is explained that Amsterdam Investments (Pty) Ltd is a wholly owned subsidiary of Cinema Holdings Limited. This letter also explained that African Consolidated Theatres Limited is the holding company of Cinema Holdings Limited (National Archives, MKD, 2/3/126, L4).


Although the final signed lease agreement between this company and the Klerksdorp Town Council could not located at the National Archives in Pretoria, the correspondence that was found appear to indicate that the lease agreement was indeed signed between Amsterdam Investments (Pty) Ltd, as a wholly owned subsidiary of Cinema Holdings Limited, and the Klerksdorp Town Council (National Archives, MKD, 2/3/126, L4).

From the very start of the intended development of the drive-in theatre, it was made clear that apart from a small number of employees of other races required to operate the drive-in theatre, admission to the drive-in theatre was only to be for white people. This step naturally formed part of the regulations and laws associated with Apartheid (National Archives, MKD, 2/3/126, L4). In a letter dated 25 February 1987, it was indicated by the Town Council of Klerksdorp that the company that operated the Meiringspark Drive-In Theatre was Ster-Kinekor and that the Town Council would allow Ster-Kinekor to admit all races to the drive-in theatre. One of the pre-conditions for this approval was that the company had to establish a waiting area for vehicles within the property (National Archives, CDB, 16109, PB13/2/K25/3). It is not presently known exactly when Ster-Kinekor became the operators of the drive-in theatre.

In terms of the naming of the drive-in theatre, various references could be found that referred to this facility as the Meiringspark Drive-In Theatre. The earliest reference mentioning this name dates to 1967. Additionally, according to applications for liquor licenses advertised in the Government Gazette of 4 April 1997, the Meiringspark Drive-In Theatre was indicated to be owned by a person named Willie Petrus van der Westhuizen. The address for the drive-in theatre was given as 24 Scheepers Avenue, Meiringspark, Klerksdorp (Government Gazette, 4 July 1997).

From the information outlined above, it seems clear that the drive-in theatre was not built before November 1959. At the earliest, the drive-in theatre may have been constructed in 1960. This date is supported by the assessment undertaken of the old topographic maps, which indicated that the drive-in theatre was built between 1953 and 1968. The drive-in theatre existed until at least 1997.

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FOX THEATRES SOUTH AFRICA (PTY.) LTD.
 HEAD OFFICE: BROADCAST HOUSE, COMMISSIONER STREET, JOHANNESBURG.

ALL COMMUNICATIONS
TO BE ADDRESSED
TO THE COMPANY

TELEPHONE 22-6222
P.O. BOX 1100
TEL. ADD. "FOXSAFRICA"

25th September, 1959

CLJ/MMF.

Town Clerk,
Municipality of Klerksdorp,
P.O. Box 160,
KLERKSDORP.

Dear Sir,

re: AMSTERDAM INVESTMENTS (PTY) LIMITED

We thank you for your letter dated 22nd instant, Reference L.4(1)/1793, and we are indeed pleased to note that the Council has consented to the catering operations at the Drive-In Cinema to be conducted by our Associated Company, THEATRE CATERERS (PTY) LIMITED in terms of Clause 11 of the Notarial Deed of Lease, which is being ceded to CINEMA HOLDINGS LIMITED.

We would confirm that this concession by the Council will in no way affect the due fulfilment of all the conditions of the lease by CINEMA HOLDINGS LIMITED.

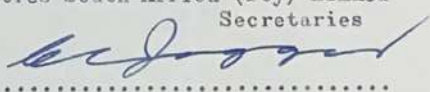
We would mention that a certificate in terms of Section 31 (1) of the Group Areas Act 1957 has been issued to us, but as the Drive-In Cinema is not likely to open until early in the new year applications for the necessary Licences will not be submitted until 1960.

NR. 2168

DATUM ONTVANG	28-9-59
VEGW. NR.	L4(1)
KINDAS	D 5/10/59
STEL	

D 5/10/59

Yours faithfully,
for AMSTERDAM INVESTMENTS (PTY) LIMITED
Fox Theatres South Africa (Pty) Limited
Secretaries


 per.....
C.L. JAGGER

DIRECTORS: A. S. AIKEN, CHAIRMAN E. F. LOMBA (U.S.A.), MANAGING DIRECTOR M. W. J. BULL, VICE-CHAIRMAN S. P. SKOURAS (U.S.A.)
 ALT. SIR WALTER HARRIGAN, (BRITISH) C. F. TODD L. R. KENT (U.S.A.) G. L. BATEMAN F. H. Y. BAMFORD

Figure 19 – Example of one of the archival documents from the National Archives in Pretoria that was used in the research presented in this section. This letter was written on 25 September 1959 by C.L. Jagger, in his capacity of secretary for Fox Theatres South Africa (Pty) Ltd. The letter was addressed to the Town Clerk of the Klerksdorp Town Council. It discussed whereas aspects of the intended lease agreement between the parties.

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4.3 Fieldwork findings

4.3.1 *Overview of the fieldwork and fieldwork findings*

The fieldwork component of the study was aimed at identifying tangible remains of archaeological, historical and heritage significance. The fieldwork was undertaken on Tuesday, 11 April 2023 by an experienced team comprising an archaeologist (Polke D. Birkholtz) and a fieldwork assistant (Derrick James).

As sections of the study area had been disturbed by inter alia the construction and operation of a drive-in theatre between c. 1960 and at least 1997, the fieldwork was planned to allow the walkthroughs to be undertaken primarily in areas believed to be less disturbed.

Throughout the fieldwork, hand-held GPS devices were used to record the tracklogs showing the routes followed by the archaeologists and heritage specialists on site. Refer to **Figure 20** for the map depicting these recording tracklogs that indicate the routes followed by the two members of the fieldwork team during the fieldwork.

During the heritage fieldwork, the poorly preserved remains of the old drive-in theatre was identified (refer site **MEK 1**). The remains of this drive-in theatre that could still be seen within the study area include tarred roads, ruins of old buildings and a series of terraced and tarred ramps where the vehicles used to park while watching movies. Although the drive-in theatre is believed to be older than 60 years, it is poorly preserved. This said, drive-in theatres represent a feature of South Africa's more recent history and heritage that is rapidly disappearing. As a result, the site is deemed to be of **Grade IIIC or Low Significance**. Refer to **Figure 21** for a map depicting the distribution of these identified heritage sites.

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Figure 20 – Map depicting the tracks that were recorded during the fieldwork. The boundaries of the study area are shown in red line.

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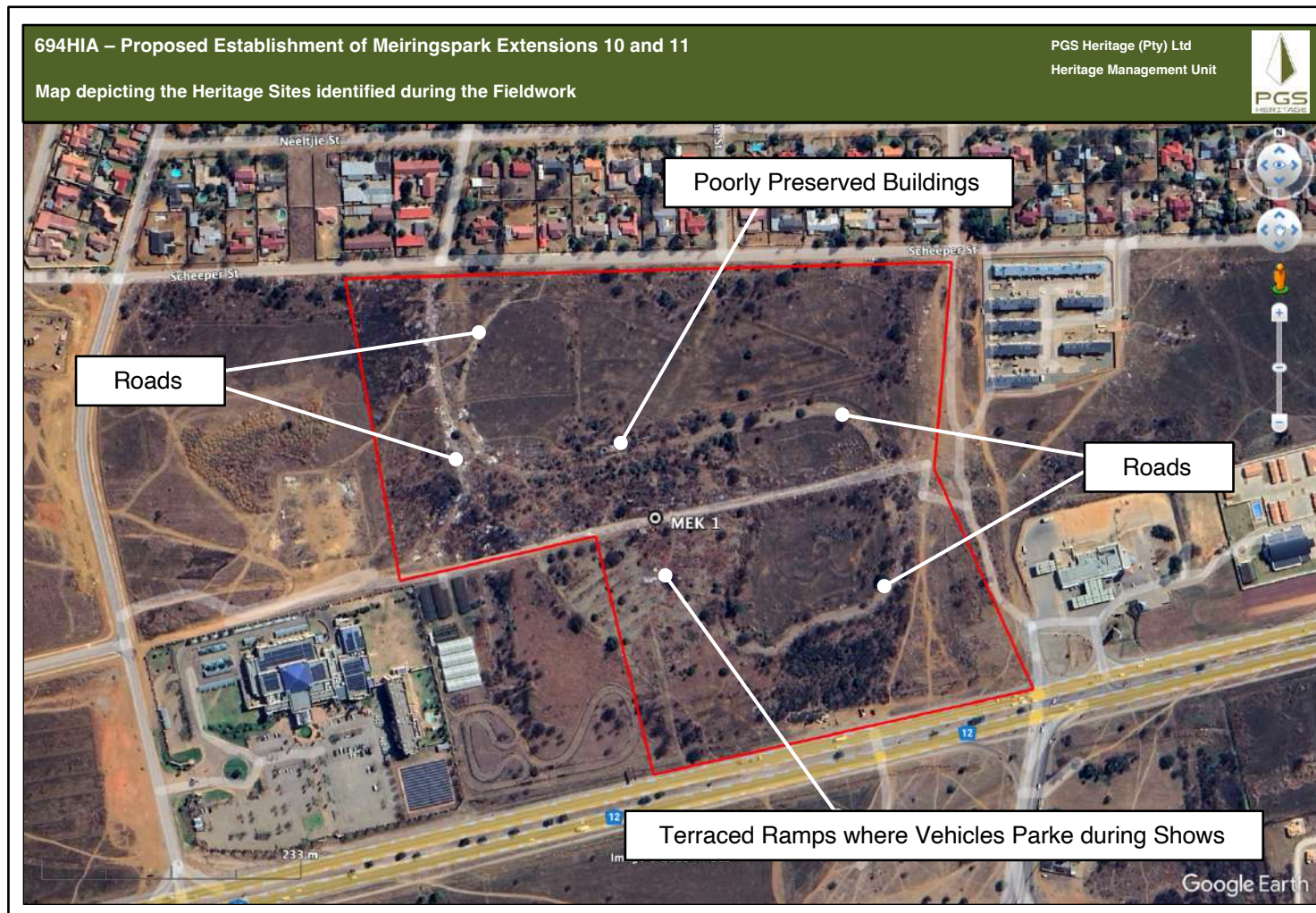


Figure 21 – Map depicting heritage sites identified during the fieldwork. Aspects of the identified site are also highlighted.

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4.3.2 Fieldwork findings

Site MEK 1

GPS Coordinates:

S -26.866915

E 26.623741

Type: Old Drive-In Theatre

Description:

Site **MEK 1** comprises an old drive-in theatre that was known as the Meiringspark Drive-In Theatre. The remains of this drive-in theatre that could still be seen within the study area include tarred roads, ruins of old buildings and a series of terraced and tarred ramps where the vehicles used to park while watching movies. Due to the dense vegetation covering extensive sections of the study area, it was impossible to establish the exact extent of the site. This said, the site is expected to extend across significant sections of the study area.

The buildings identified within the study area and forming part of the site are all poorly preserved and densely overgrown. They include at least one building that was built and used as a bathroom, presumably for patrons of the drive-in theatre. Other structural remains are expected to include typical features associated with a drive-in theatre, including a projector room, cafeteria or restaurant etc.

Limited archival research was undertaken to attempt to date the drive-in theatre. The results of this research are presented in Section 4.2.6. From this information it seems clear that the drive-in theatre was not built before November 1959. At the earliest, it may have been constructed in 1960. This date is supported by the assessment undertaken of the old topographic maps, which indicated that the drive-in theatre was built between 1953 and 1968. This is said as the First Edition of the 2626DC sheet that was surveyed in 1953 did not contain any evidence for the drive-in theatre. However, the Second Edition of the of the 2626DC sheet that was surveyed in 1968 did depict the drive-in theatre and also indicated that it was named the Meiringspark Drive-In Theatre. Other references located during the research indicated that the drive-in theatre existed until at least 1997.

Based on the above-mentioned information, it is believed that the drive-in theatre at site **MEK 1** is likely older than 60 years.

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Significance:

Although the drive-in theatre is believed to be older than 60 years, it is poorly preserved. However, drive-in theatres represent a feature of South Africa's more recent history and heritage that is rapidly disappearing. As a result, the site is deemed to be of **Grade IIIC** or **Low Significance**. The structure may be demolished, but mitigation would be required.

Site Extent:

Due to the dense vegetation characterising the study area, the exact extent of the site is not presently known. As indicated, it is expected that the drive-in theatre covered extensive sections of the study area.

Impact Assessment and Mitigation:

See **Chapter 5** for impact assessment calculations and **Chapter 6** for required mitigation and measures.



Figure 22 – The terraced ramps depicted here formed part of the old drive-in theatre that was located within the study area. These ramps allowed attendees to park their vehicles against and on the ramps thereby raising the front of the vehicles and improving visibility of the screen that the movies were projected on.

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Figure 23 – A section of one of the roads crossing through the study area and which provided access to the old drive-in theatre.



Figure 24 – One of the poorly preserved structural remains identified within the study area. These buildings were associated with the old drive-in theatre.

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Figure 25 – This poorly preserved building appears to have been a bathroom used by the patrons of the drive-in theatre. Note the dense vegetation.



Figure 26 – More poorly preserved structures identified within the study area. The dense vegetation characterising the study area and site can again be seen.

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5 IMPACT ASSESSMENT

5.1 Introduction

In this section, an assessment will be made of the impact of the proposed development on the identified heritage sites. The following general observations will apply for the impact assessment undertaken in this report:

- The impact assessment methodology utilised in this section is explained in more detail in **Section 3.3** of this report.
- Notwithstanding their individual localities, all sites located within the boundaries of the study area are assumed to be destroyed once construction takes place.

With the above-mentioned as background, the HIA identified the following development impacts on heritage:

- Destruction of the poorly preserved remains of the Meiringspark Drive-In Cinema identified at site **MEK 1**.

In terms of the project phases, site **MEK 1** is expected to be completely destroyed during the Construction Phase. With its destruction completed during the Construction Phase, no impacts are expected during the Operational and Decommissioning Phases.

5.2 Assessment of the Pre-Mitigation Impacts

5.2.1 Assessment of the Pre-Mitigation Impact on Site MEK 1

In this section, the pre-mitigation impact of the proposed development on site **MEK 1** will be assessed.

$$\text{Impact Risk} = \frac{(\text{Significance} + \text{Spatial} + \text{Temporal})}{3} \times \frac{\text{Probability}}{5}$$

$$\text{Impact Risk} = \frac{(2 + 3 + 4)}{3} \times \frac{4}{5}$$

IMPACT RISK = 2.40

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Table 12 - Risk Calculation for the Unmitigated Development Impact on site MEK 1.

Impact	Significance	Spatial Scale	Temporal Scale	Probability	Rating
	Low	Local	Long Term	Very Likely	Moderate
Unmitigated Impact on MEK 1	2	3	4	4	2.40

The calculation of the assessment of the unmitigated impact of the proposed development on this site has revealed that the impact significance of the proposed development on it is expected to be of **Moderate Significance**. The result of this impact assessment calculation means that mitigation measures would be required for these sites. See **Chapter 6** for required mitigation measures.

5.3 Assessment of the Post-Mitigation Impacts

5.3.1 Assessment of the Post-Mitigation Impact on Site MEK 1

The post-mitigation impact of the proposed development on site **MEK 1** will be assessed.

$$\text{Impact Risk} = \frac{(\text{Significance} + \text{Spatial} + \text{Temporal})}{3} \times \frac{\text{Probability}}{5}$$

$$\text{Impact Risk} = \frac{(1 + 2 + 4)}{3} \times \frac{4}{5}$$

IMPACT RISK = 1.87

Table 13 - Risk Calculation for the Unmitigated Development Impact on site MEK 1.

Impact	Significance	Spatial Scale	Temporal Scale	Probability	Rating
	Low	Study Area	Long Term	Very Likely	Low
Mitigated Impact on MEK 1	1	2	4	4	1.87

The calculation of the assessment of the post-mitigation impact of the proposed development on this site has revealed that the impact significance of the proposed development on it is expected to be of **Low Significance**. The result of this post-mitigation impact assessment calculation indicates that the successful completion of the mitigation has reduced the impact risk from **Moderate** to **Low Significance**, which represents an acceptable impact risk. See **Chapter 6** for required mitigation measures.

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6 MITIGATION

6.1 Introduction

The impact assessment calculations undertaken in **Chapter 5** revealed that mitigation measures would be required for the following development impacts:

- Destruction of the poorly preserved remains of the Meiringspark Drive-In Cinema identified at site **MEK 1**.

6.2 Required Mitigation

6.2.1 *Mitigation Measures required for the Old Drive-In Theatre at site **MEK 1***

The following mitigation measures are required for site **MEK 1**:

- The fact that a drive-in theatre was operated within the study area from c. 1960 until the 1990s, coupled with the fact that many drive-theatres are currently being destroyed and are disappearing from memory, indicate that the best way to mitigate the site would be to memorialize the history of this drive-in theatre within the study area;
- Further research should be undertaken as a way in which to obtain information about the history of the drive-in theatre. This may include archival research and the study of old aerial photographs. Attempts should also be made to obtain photographs that depict the drive-in theatre and the way in which it operated from local residents. Discussions with such former residents who have knowledge of the drive-in theatre should also be undertaken as a way in which to record some of the oral history and memories of the site.
- The mitigation of the drive-in theatre located within the study area should culminate in the memorialization of this facility through printed permanent displays. The displays should contain the information collected and obtained as part of the previous point and should form a permanent feature within the proposed development. These permanent displays should be placed in a public area within the development.
- Apart from the above-mentioned memorialization, no further mitigation measures are required.

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7 CONCLUSIONS AND RECOMMENDATIONS

7.1 Introduction

PGS Heritage (Pty) Ltd (PGS) was appointed by Ecologic Afrika to undertake a Heritage Impact Assessment (HIA) that forms part of the Environmental Impact Assessment (EIA) for the proposed Meiringspark Extensions 10 and 11. The proposed activities comprise the clearance of 19,2352 ha of indigenous vegetation and township establishment. The proposed project is located on Portion 603 and Part of Portion 604 of the Farm Townlands of Klerksdorp 424 IP, Klerksdorp, City of Matlosana Local Municipality, Dr Kenneth Kaunda District Municipality, North West Province.

The HIA revealed that the study area was at least partially used as a drive-in theatre. The desktop study undertaken as part of this project revealed that the name of the facility was the Meiringspark Drive-In Theatre and that it appears to have been originally established in c. 1960.

During the heritage fieldwork, the poorly preserved remains of the old drive-in theatre was identified (refer site **MEK 1**). The remains of this drive-in theatre that could still be seen within the study area include tarred roads, ruins of old buildings and a series of terraced and tarred ramps where the vehicles used to park while watching movies. Although the drive-in theatre is believed to be older than 60 years, it is poorly preserved. However, drive-in theatres represent a feature of South Africa's more recent history and heritage that is rapidly disappearing. As a result, the site is deemed to be of **Grade IIIC** or **Low Significance**.

7.2 Impact Assessment

The HIA identified the following development impacts on heritage:

- Destruction of the poorly preserved remains of the Meiringspark Drive-In Cinema identified at site **MEK 1**.

Impact assessment calculations were undertaken, which revealed that mitigation measures would be required for the identified site.

7.3 Required Mitigation

The following mitigation measures are required for site **MEK 1**:

- The fact that a drive-in theatre was operated within the study area from c. 1960 until the 1990s, coupled with the fact that many drive-theatres are currently being destroyed and

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are disappearing from memory, indicate that the best way to mitigate the site would be to memorialize the history of this drive-in theatre within the study area;

- Further research should be undertaken as a way in which to obtain information about the history of the drive-in theatre. This may include archival research and the study of old aerial photographs. Attempts should also be made to obtain photographs that depict the drive-in theatre and the way in which it operated from local residents. Discussions with such former residents who have knowledge of the drive-in theatre should also be undertaken as a way in which to record some of the oral history and memories of the site.
- The mitigation of the drive-in theatre located within the study area should culminate in the memorialization of this facility through printed permanent displays. The displays should contain the information collected and obtained as part of the previous point and should form a permanent feature within the proposed development. These permanent displays should be placed in a public area within the development.
- Apart from the above-mentioned memorialization, no further mitigation measures are required.

7.4 Conclusions

On the condition that the general recommendations and mitigation measures outlined in this HIA report are adhered to, and in cognisance of the assumptions and limitations contained in this HIA report, no heritage reasons can be given for the development not to continue.

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8.2 Unpublished References

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8.3 Historical Topographic Maps

All the historic topographical maps used in this report were obtained from the Directorate: National Geo-spatial Information of the Department of Rural Development and Land Reform in Cape Town.

8.4 Historical Topographic Maps

At least some of the aerial depictions of the study área were obtained using Google Earth.

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APPENDIX A PGS TEAM CVS

PROFESSIONAL CURRICULUM VITAE FOR POLKE DOUSSY BIRKHOLTZ

Name: *Polke Doussy Birkholtz*

Date & Place of Birth: *9 February 1975 – Klerksdorp, North West Province, South Africa*

Place of Tertiary Education & Dates Associated:

Institution: University of Pretoria

Qualification: BA (Cum Laude) - Bachelor of Arts Specializing in Archaeology, History & Anthropology

Date: 1996

Institution: University of Pretoria

Qualification: BA Hons (Cum Laude) - Bachelor of Arts with Honours Degree Specializing in Archaeology

Date: 1997

Qualifications:

BA - Degree specialising in Archaeology, History and Anthropology

BA Hons - Professional Archaeologist

Memberships:

Association of Southern African Professional Archaeologists (ASAPA)

Professional Member of the CRM Section of ASAPA

Overview of Post Graduate Experience:

1997 – 2000 – Member/Archaeologist – Archaeo-Info

2001 – 2003 – Archaeologist/Heritage Specialist – Helio Alliance

2000 – 2008 – Member/Archaeologist/Heritage Specialist – Archaeology Africa

2003 - Present – Director / Archaeologist / Heritage Specialist – PGS Heritage

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Languages: English: Speak, Read & Write & Afrikaans: Speak, Read & Write

Total Years' Experience: 22 Years

Experience Related to the Scope of Work:

- Polke has worked as a **HERITAGE SPECIALIST / ARCHAEOLOGIST / HISTORIAN** on more than 300 projects and acted as **PROJECT MANAGER** on almost all of these projects. His experience includes the following:
 - Development of New Sedimentation and Flocculation Tanks at Rand Water's Vereeniging Pumping Station, Vereeniging, Gauteng Province. Heritage Impact Assessment for *Greenline*.
 - EThekwin Northern Aqueduct Project, Durban, KwaZulu-Natal. Heritage Impact Assessment for *Strategic Environmental Focus*.
 - Johannesburg Union Observatory, Johannesburg, Gauteng Province. Heritage Inventory for *Holm Jordaan*.
 - Development at Rand Water's Vereeniging Pumping Station, Vereeniging, Gauteng Province. Heritage Impact Assessment for *Aurecon*.
 - Comet Ext. 8 Development, Boksburg, Gauteng Province. Phase 2 Heritage Impact Assessment for *Urban Dynamics*.
 - Randjesfontein Homestead, Midrand, Gauteng Province. Baseline Heritage Assessment with Nkosinathi Tomose for Johannesburg City Parks.
 - Rand Leases Ext. 13 Development, Roodepoort, Gauteng Province. Heritage Impact Assessment for *Marsh*.
 - Proposed Relocation of the Hillendale Heavy Minerals Plant (HHMP) from Hillendale to Fairbreeze, KwaZulu-Natal. Heritage Impact Assessment for *Goslar Environmental*.
 - Portion 80 of the farm Eikenhof 323 IQ, Johannesburg, Gauteng Province. Heritage Inventory for *Khare Incorporated*.
 - Comet Ext. 14 Development, Boksburg, Gauteng Province. Heritage Impact Assessment for *Marsh*.
 - Rand Steam Laundries, Johannesburg, Gauteng Province. Archival and Historical Study for *Impendulo and Imperial Properties*.
 - Mine Waste Solutions, near Klerksdorp, North West Province. Heritage Inventory for *AngloGold Ashanti*.
 - Consolidated EIA and EMP for the Kroondal and Marikana Mining Right Areas, North West Province. Heritage Impact Assessment for *Aquarius Platinum*.

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- Wilkoppies Shopping Mall, Klerksdorp, North West Province. Heritage Impact Assessment for the *Center for Environmental Management*.
- Proposed Vosloorus Ext. 24, Vosloorus Ext. 41 and Vosloorus Ext. 43 Developments, Ekurhuleni District Municipality, Gauteng Province. Heritage Impact Assessment for *Enkanyini Projects*.
- Proposed Development of Portions 3, 6, 7 and 9 of the farm Olievenhoutbosch 389 JR, City of Tshwane Metropolitan Municipality, Gauteng Province. Heritage Impact Assessment for *Marsh*.
- Proposed Development of Lotus Gardens Ext. 18 to 27, City of Tshwane Metropolitan Municipality, Gauteng Province. Heritage Impact Assessment for *Pierre Joubert*.
- Proposed Development of the site of the old Vereeniging Hospital, Vereeniging, Gauteng Province. Heritage Scoping Assessment for *Lekwa*.
- Proposed Demolition of an Old Building, Kroonstad, Free State Province. Phase 2 Heritage Impact Assessment for *De Beers Consolidated Mines*.
- Proposed Development at Westdene Dam, Johannesburg, Gauteng Province. Heritage Impact Assessment for *Newtown*.
- West End, Central Johannesburg, Gauteng Province. Phase 1 Heritage Impact Assessment for the *Johannesburg Land Company*.
- Kathu Supplier Park, Kathu, Northern Cape Province. Heritage Impact Assessment for *Synergistics*.
- Matlosana 132 kV Line and Substation, Stilfontein, North West Province. Heritage Impact Assessment for *Anglo Saxon Group and Eskom*.
- Marakele National Park, Thabazimbi, Limpopo Province. Cultural Resources Management Plan for *SANParks*.
- Cullinan Diamond Mine, Cullinan, Gauteng Province. Heritage Inventory for *Petra Diamonds*.
- Highveld Mushrooms Project, Pretoria, Gauteng Province. Heritage Impact Assessment for *Mills & Otten*.
- Development at the Reserve Bank Governor's Residence, Pretoria, Gauteng Province. Archaeological Excavations and Mitigation for the *South African Reserve Bank*.
- Proposed Stones & Stones Recycling Plant, Johannesburg, Gauteng Province. Heritage Scoping Report for *KV3*.
- South East Vertical Shaft Section of ERPM, Boksburg, Gauteng Province. Heritage Scoping Report for *East Rand Proprietary Mines*.
- Proposed Development of the Top Star Mine Dump, Johannesburg, Gauteng Province. Detailed Archival and Historical Study for *Matakoma*.

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- Soshanguve Bulk Water Replacement Project, Soshanguve, Gauteng Province. Heritage Impact Assessment for *KWP*.
- Biodiversity, Conservation and Participatory Development Project, Swaziland. Archaeological Component for *Africon*.
- Camdeboo National Park, Graaff-Reinet, Eastern Cape Province. Cultural Resources Management Plan for *SANParks*.
- Main Place, Central Johannesburg, Gauteng Province. Phase 1 Heritage Impact Assessment for the *Johannesburg Land Company*.
- Modderfontein Mine, Springs, Gauteng Province. Detailed Archival and Historical Study for *Consolidated Modderfontein Mines*.
- Proposed New Head Office for the Department of Foreign Affairs, Pretoria, Gauteng Province. Heritage Impact Assessment for *Holm Jordaan Group*.
- Proposed Modification of the Lukasrand Tower, Pretoria, Gauteng Province. Heritage Assessment for *IEPM*.
- Proposed Road between the Noupoot CBD and Kwazamukolo, Northern Cape Province. Heritage Impact Assessment for *Gill & Associates*.
- Proposed Development at the Johannesburg Zoological Gardens, Johannesburg, Gauteng Province. Detailed Archival and Historical Study for *Matakoma*.

- Polke's **KEY QUALIFICATIONS:**

- Project Management
- Archaeological and Heritage Management
- Archaeological and Heritage Impact Assessment
- Archaeological and Heritage Fieldwork
- Archival and Historical Research
- Report Writing

- Polke's **INFORMATION TECHNOLOGY EXPERIENCE:**

- *MS Office – Word, Excel, & Powerpoint*
- *Google Earth*
- *Garmin Mapsource*
- *Adobe Photoshop*
- *Corel Draw*

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