

**PHASE 1 ARCHAEOLOGICAL AND HERITAGE IMPACT ASSESSMENT REPORT FOR THE
PROPOSED LIQUEFIED PETROLEUM GAS (LPG) STORAGE FACILITY ON ERF 79
MARELDEN EXTENSION 5 TOWNSHIP WITHIN EMALAHLENI LOCAL MUNICIPALITY,
MPUMALANGA PROVINCE.**



DATE: MAY 2022

Document Information

Item	Description
Proposed development and location	Proposed Liquefied Petroleum Gas (LPG) storage facility on ERF 79 Marelden Extension 5 Township within eMalahleni Local Municipality, Witbank Magisterial District, Mpumalanga Province.
Purpose of the study	To carry out heritage sensitivity assessment to determine the presence of cultural heritage sites and the impact of the proposed project on heritage resources
1:50 000 Topographic Map	2529CC
Coordinates	See figure 2
Municipalities	eMalahleni Local Municipality, Witbank Magisterial District
Predominant land use of surrounding area	Industrial, mining, roads and commercial infrastructure
Applicant	Tsogolo Energy (Pty) Ltd 10 Eva Road, Petit, Benoni, Gauteng, 1512. Tell: 076 277 2094 Email: Gugu@tsogolo.co.za
EAP	Singo Consulting (Pty) Ltd Office 870, 5 Balalaika Street Tasbet Park Ext 2, Witbank 1040. Tell: 013 692 0041/078 548 1244 Fax: 086 5144 103 Email: admin@singoconsulting.co.za , rudzani@singoconsulting.co.za
Heritage Consultant	Integrated Specialist Services (Pty) Ltd 65 Naaldehout Avenue, Heuweloord, Centurion, 0157 Tel: +27 11 037 1565, Cell: +27 71 685 9247 Email: trust@issolutions.co.za
Authors	Trust Mlilo (Archaeology and Heritage Specialist)
Date of Report	05 May 2022

NATIONAL LEGISLATION AND REGULATIONS GOVERNING THIS REPORT

This is a specialist report' and is compiled in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended, and the Environmental Impact Assessment Regulations, 2014.

DECLARATION OF INDEPENDENCE

In terms of Chapter 5 of the National Environmental Management Act of 1998 specialists involved in Impact Assessment processes must declare their independence.

Trust Mlilo, do hereby declare that we are financially and otherwise independent of the client and their consultants, and that all opinions expressed in this document are substantially my own, notwithstanding the fact that we have received fair remuneration from the client for the preparation of this report.

Expertise:

Trust Mlilo, MA. (Archaeology), BA Hons, PDGE, BA & (Univ. of Pretoria) and PhD (Cand. Wits) ASAPA (Professional member) with more than 15 years of experience in archaeological and heritage impact assessment and management. Mr Mlilo is an accredited member of the Association for Southern African Professional Archaeologists (ASAPA), Amafa akwaZulu Natali and Eastern Cape Heritage Resources Agency (ECPHRA). He has conducted more than hundred AIA/HIA Studies, heritage mitigation work and heritage development projects over the past 15 years of service. The completed projects vary from Phase 1 and Phase 2 as well as heritage management work for government, parastatals (Eskom) and several private companies such as BHP Billiton, Rhino Minerals e.t.c.

Independence

The views expressed in this document are the objective, independent views of Mr Trust Mlilo. The survey was carried out under Singo Consulting (Pty) Ltd. Integrated Specialist Services (Pty) Ltd has no business, personal, financial, or other interest in the proposed storage facility apart from fair remuneration for the work performed.

Conditions relating to this report

The content of this report is based on the authors' best scientific and professional knowledge as well as the available information. Integrated Specialist Services (Pty) Ltd reserves the right to modify the report in any way deemed fit should new, relevant or previously unavailable, or undisclosed information becomes known to the author from ongoing research or further work in this field or pertaining to this investigation.

This report must not be altered or added to without the prior written consent of the authors and Singo Consulting (Pty) Ltd. This also refers to electronic copies of the report which are supplied for the purposes of inclusion as part of other reports, including main reports. Similarly, any recommendations, statements or conclusions drawn from or based on this report must make reference to this report. If these form part of a main report relating to this investigation or report, this report must be included in its entirety as an appendix or separate section to the main report.

Authorship: This AIA/HIA Report has been prepared by Mr. Trust Mlilo. The report is for the review of the Heritage Resources Agency (PHRA).

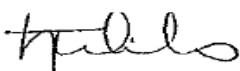
Geographic Co-ordinate Information: Geographic coordinates in this report were obtained using a hand-held Garmin Global Positioning System device. The manufacturer states that these devices are accurate to within +/- 5 m.

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

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

The Archaeological and Heritage Impact Assessment Study was carried out within the context of tangible and intangible cultural heritage resources as defined by the SAHRA Regulations and Guidelines as to the authorisation of the proposed Liquefied Petroleum Gas (LPG) storage facility, being proposed by Tsogolo Energy (Pty) Ltd.

Signed by



05/ 05/ 2022

Acknowledgments

The author acknowledges Singo Consulting (Pty) Ltd for the assistance with project information, and the associated project BID as well as for responding to technical queries related to the project.

TABLE OF CONTENTS

EXECUTIVE SUMMARY	VIII
ABBREVIATIONS	XI
KEY CONCEPTS AND TERMS.....	XII
1.1. BACKGROUND	- 15 -
1.2. DESCRIPTION OF THE PROPOSED PROJECT.....	- 15 -
1.4. LOCATION OF THE PROPOSED DEVELOPMENT	- 16 -
2 LEGAL REQUIREMENTS.....	- 20 -
2.1. ASSESSING THE SIGNIFICANCE OF HERITAGE RESOURCES	- 21 -
2.2. CATEGORIES OF SIGNIFICANCE	- 22 -
2.3. AESTHETIC VALUE:.....	- 23 -
2.4. HISTORICAL VALUE:.....	- 23 -
2.5. SCIENTIFIC VALUE:	- 23 -
2.6. SOCIAL VALUE:	- 23 -
2.7. FORMALLY PROTECTED SITES	- 23 -
2.8. GENERAL PROTECTION.....	- 23 -
2.9. SIGNIFICANCE RATING ACTION.....	- 24 -
2.10. OTHER RELEVANT LEGISLATIONS.....	- 27 -
2.11. TERMS OF REFERENCE.....	- 27 -
3 METHODOLOGY	- 35 -
3.1 THE FIELDWORK SURVEYS	- 35 -
3.2 VISIBILITY AND CONSTRAINTS.....	- 36 -
3.3 ASSUMPTIONS AND LIMITATIONS.....	- 36 -
3.4 CONSULTATIONS.....	- 36 -
4 CULTURE HISTORY BACKGROUND OF THE PROJECT AREA	- 37 -
4.1 ARCHAEOLOGICAL CONTEXT	- 37 -
4.2 STONE AGE ARCHAEOLOGY	- 37 -
4.3 IRON AGE ARCHAEOLOGY	- 38 -
4.4 HISTORICAL BACKGROUND.....	- 39 -
4.5 MINING HISTORY.....	- 40 -
4.6 INTANGIBLE HERITAGE	- 40 -
4.7 SAHRIS DATA BASE AND IMPACT ASSESSMENT REPORTS IN THE PROJECT AREA	- 41 -
5 RESULTS OF THE ARCHAEOLOGICAL/HERITAGE ASSESSMENT STUDY	- 41 -
5.1. ARCHAEOLOGICAL SITES	- 42 -
5.2. BUILDINGS AND STRUCTURES OLDER THAN 60 YEARS	- 43 -

5.3. BURIAL GROUNDS AND GRAVES.....	- 43 -
5.4. SIGNIFICANCE VALUATION FOR BURIAL GROUND, HISTORIC CEMETERIES, AND INDIVIDUAL GRAVES	- 43 -
5.5. PUBLIC MONUMENTS AND MEMORIALS	- 43 -
5.6. BATTLE FIELDS.....	- 44 -
5.7. ARCHAEO-METALLURGY, PREHISTORIC MINING AND MINING HERITAGE.....	- 44 -
5.8. VISUAL IMPACTS.....	- 44 -
5.9. MITIGATION.....	- 44 -
6 CUMMULATIVE IMPACTS.....	- 44 -
7 ASSESSMENT OF SIGNIFICANCE	- 45 -
8 STATEMENT OF SIGNIFICANCE	- 49 -
9 DISCUSSIONS.....	- 50 -
10 RECOMMENDATIONS	- 50 -
11 CONCLUDING REMARKS	- 52 -
12 BIBLIOGRAPHY	- 53 -
APPENDIX 2: HERITAGE MANAGEMENT PLAN INPUT INTO THE PROPOSED LIQUEFIED PETROLEUM GAS (LPG) STORAGE FACILITY APPLICATION EMPR.....	- 66 -
APPENDIX 3: LEGAL BACKGROUND IN SOUTH AFRICA.....	- 67 -

TABLE OF PLATES [PHOTOGRAPHS]

Plate 1: Photo 1: Showing access road into the proposed development site (Photograph © by Author 2022).....	- 28 -
Plate 2: Photo 2: View of dense grass cover within the proposed development site (Photograph © by Author 2022).	- 28 -
Plate 3: Photo 3: View of the proposed development site (Photograph © by Author 2022).	- 29 -
Plate 4: Photo 4: Showing dense grass cover within the development site. Note dense vegetation cover compromises the visibility of archaeological material (Photograph © by Author 2022)	- 29 -
Plate 5: Photo 5: View of the proposed development site. Note the illegal dumping of rocks within the development site (Photograph © by Author 2022).....	- 30 -
Plate 6: Photo 6: Showing cut-down trees within the proposed development site (Photograph © by Author 2022).....	- 30 -
Plate 7: Photo 7: View of the proposed development site. Note the existing building in the background (Photograph © by Author 2022).	- 31 -
Plate 8: Photo 8: View of the proposed development site (Photograph © by Author 2022).	- 31 -
Plate 9: Photo 9: View of the proposed development site (Photograph © by Author 2022).	- 32 -
Plate 10: Photo 10: View of dense vegetation cover within the proposed development site (Photograph © by Author 2022)..	- 32 -

Plate 11: Photo 11: View of previously cleared up section within the proposed development site (Photograph © by Author 2022). - 33 -

Plate 12: Photo 12: View of dense vegetation cover within the proposed development site (Photograph © by Author 2022).. - 33 -

Plate 13: Photo 13: View of access roads and existing buildings within the vicinity of the proposed development site (Photograph © by Author 2022). - 34 -

Plate 14: Photo 14: View of dense vegetation cover within the proposed development site (Photograph © by Author 2022).. - 34 -

TABLE OF FIGURES

Figure 1: Proposed Liquefied Petroleum Gas (LPG) storage facility (Singo Consulting (Pty) Ltd 2022)..... - 17 -

Figure 2: Locality Map of the proposed development site (ISS (Pty) Ltd 2022)..... - 18 -

Figure 3: Proposed development site (ISS (Pty) Ltd 2022)..... - 19 -

EXECUTIVE SUMMARY

Tsogolo Energy (Pty) Ltd intends to construct a Liquefied Petroleum Gas (LPG) storage facility, on Erf 79 Marelden Extension 5 Township within eMalahleni Local Municipality, Mpumalanga Province. This Archaeology and Heritage Impact Assessment (AIA/HIA) is in fulfilment of Section 38 of the National Heritage Resources Act 25 of 1999 (NHRA). This Phase 1 Archaeology and heritage study serves to inform and guide the applicant and contractors about the potential impacts that the proposed Liquefied Petroleum Gas storage facility may have on heritage resources (if any) located in the study area. The document must also inform the Mpumalanga Province Heritage Resource Agency (MPHRA) and the South African Heritage Resource Agency (SAHRA) Burial Ground and Graves Unit about the presence, absence and significance of heritage resources that may be located within the proposed development site.

The identification, recording, reporting and salvaging (if necessary) of significant heritage resources that may occur on the development footprint should be undertaken by a competent heritage practitioner as required by South African heritage legislation. In compliance with Section 38 of the NHRA Singo Consulting (Pty) Ltd retained Integrated Specialist Services (ISS) on behalf of Tsogolo Energy (Pty) Ltd, to conduct Phase 1 AIA/HIA for the proposed Liquefied Petroleum Gas (LPG) storage facility, on Erf 79 Marelden Extension 5 Township within eMalahleni Local Municipality, Witbank Magisterial District, Mpumalanga Province.

A stepped approach involving desktop studies, drive-through and detailed field walking was employed in order to identify any heritage landmarks on and around the development footprint. However, it should be noted that the proposed Liquefied Petroleum Gas (LPG) storage facility development site is not on pristine grounds, having been previously occupied (see Figure 1). However, when these heritage resources (including graves) are encountered, work must be stopped forth-with, and the finds must be reported to the MPHRA. However, in terms of the archaeology of the area under study, no mitigation will be required prior to approval of the proposed Liquefied Petroleum Gas (LPG) storage facility. This report must also be submitted to Mpumalanga-PHRA for review.

- The findings of this report have been informed by desktop data review, field survey and impact assessment reporting which include recommendations to guide heritage authorities in making decisions with regards to the proposed development.
- The proposed Liquefied Petroleum Gas (LPG) storage facility development site is accessible, and the field survey was effective enough to cover most sections of the development site.
- The immediate project area is predominantly industrial, mining, agriculture and roads.

The report sets out the potential impacts of the proposed Liquefied Petroleum Gas storage facility development on heritage matters and recommends appropriate safeguard and mitigation measures that are designed to reduce the impacts where appropriate. The report makes the following recommendations:

- The proposed Liquefied Petroleum Gas (LPG) storage facility development is supported from a heritage perspective without any need for further investigation and mitigation
- It is also advised that the SAHRA/ MPHRA is alerted when work on site begins.
- Should chance archaeological materials or human burial remains be exposed during subsurface excavation work on any section of the proposed development laydown sites, work should cease on the affected area and the discovery must be reported to the heritage authorities immediately so that an investigation and evaluation of the finds can be made. The overriding objective, where remedial action is warranted, is to minimize disruption in construction scheduling while recovering archaeological and any affected cultural heritage data as stipulated by the NHRA regulations.
- If during development, operational or closure phases of this project, any person employed by the applicant, one of its subsidiaries, contractors and subcontractors, or service provider, finds any artefact of cultural significance, work must cease at the site of the find and this person must report this find to their immediate supervisor, and through their supervisor to the site manager.
- The Site Manager must then make an initial assessment of the extent of the find and confirm the extent of the work stoppage in that area before informing an archaeological practitioner.
- In the event that archaeological materials are unearthed, all construction activities within a radius of at least 30m of such indicator should cease and the area be demarcated by a danger tape. Accordingly, a professional archaeologist should be contacted immediately
- It is the responsibility of the applicant to protect the site from publicity (i.e., media) until a mutual agreement is reached.
- Noteworthy that any measures to cover up the suspected archaeological material or to collect any resources is illegal and punishable by law. In the same manner, no person may exhume or collect such remains, whether of recent origin or not, without the endorsement by MPHRA.
- The applicant is reminded that unavailability of archaeological materials (e.g., pottery, stone tools, remnants of stonewalling, graves, etc.) and fossils does not mean they do not occur, archaeological material might be hidden underground, and as such the client is reminded to take precautions during construction.
- Overall, impacts to heritage resources are not considered to be significant for the project receiving environment. It is thus concluded that the project may be cleared to proceed as planned subject to the

Heritage Authority ensuring that detailed heritage monitoring procedures are included in the project EMPr for the construction phase, include chance archaeological finds mitigation procedure in the project EMPr (See Appendix 1) as accessible to any interested and affected parties within the limits of the legislations.

This report concludes that the impacts of the proposed development on the cultural environmental values are not likely to be significant on the entire development site if the Environmental Management Programme (EMPr) includes recommended safeguard and mitigation measures identified in this report.

The assessment reached the following conclusions

- The entire Gas storage facility development site has been disturbed by current previous destructive land use activities at the site (see Figure 1).

ABBREVIATIONS

AIA	Archaeological Impact Assessment
EAP	Environmental Assessment Practitioner
ECO	Environmental Control Officer
A	Environmental Impact Assessment
EM	Environmental Manager
EMP	Environmental Management Plan
HIA	Heritage Impact Assessment
LIA	Late Iron Age
NHRA	Nation Heritage Resources Act, Act 25 of 1999
PHRA	Provincial Heritage Resources Agency
PM	Project Manager
SAHRA	South African Heritage Resources Agency
SM	Site Manager
ISS	Integrated Specialist Services (Pty) Ltd

KEY CONCEPTS AND TERMS

Periodization

Archaeologists divide the different cultural epochs according to the dominant material finds for the different time periods. This periodization is usually region-specific, such that the same label can have different dates for different areas. This makes it important to clarify and declare the periodization of the area one is studying. These periods are nothing a little more than convenient time brackets because their terminal and commencement are not absolute and there are several instances of overlap. In the present study, relevant archaeological periods are given below;

Early Stone Age (~ 2.6 million to 250 000 years ago)

Middle Stone Age (~ 250 000 to 40-25 000 years ago)

Later Stone Age (~ 40-25 000, to recently, 100 years ago)

Early Iron Age (~ AD 200 to 1000)

Late Iron Age (~ AD1100-1840)

Historic (~ AD 1840 to 1950, but a Historic building is classified as over 60 years old)

Definitions

Just like periodization, it is also critical to define key terms employed in this study. Most of these terms derive from South African heritage legislation and its ancillary laws, as well as international regulations and norms of best-practice. The following aspects have a direct bearing on the investigation and the resulting report:

Cultural (heritage) resources are all non-physical and physical human-made occurrences, and natural features that are associated with human activity. These can be singular or in groups and include significant sites, structures, features, ecofacts and artefacts of importance associated with the history, architecture, or archaeology of human development.

Cultural significance is determined by means of aesthetic, historic, scientific, social, or spiritual values for past, present, or future generations.

Value is related to concepts such as worth, merit, attraction or appeal, concepts that are associated with the (current) usefulness and condition of a place or an object. Although significance and value are not mutually exclusive, in some cases the place may have a high level of significance but a lower level of value. Often, the evaluation of any feature is based on a combination or balance between the two.

Isolated finds are occurrences of artefacts or other remains that are not in-situ or are located apart from archaeological sites. Although these are noted and recorded, but do not usually constitute the core of an impact assessment, unless if they have intrinsic cultural significance and value.

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

Archaeological site/materials are remains or traces of human activity that 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. According to the National Heritage Resources Act, 1999, (Act No. 25 of 1999), as amended (NHRA), no archaeological artefact, assemblage, or settlement (site) and no historical building or structure older than 60 years may be altered, moved or destroyed without the necessary authorisation from the SAHRA or a provincial heritage resources authority.

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

Chance finds means archaeological artefacts, features, structures or historical remains accidentally found during development.

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

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

Heritage Impact Assessment (HIA) refers to the process of identifying, predicting, and assessing the potential positive and negative cultural, social, economic, and biophysical impacts of any proposed project, which requires authorisation of permission by law and which may significantly affect the cultural and natural heritage resources. Accordingly, an HIA must include recommendations for appropriate mitigation measures for minimising or circumventing negative impacts, measures enhancing the positive aspects of the proposal and heritage management and monitoring measures.

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

Mitigation is the implementation of practical measures to reduce and circumvent adverse impacts or enhance beneficial impacts of an action.

Mining heritage sites refer to old, abandoned mining activities, underground or on the surface, which may date from the prehistorical, historical or the relatively recent past.

Study area or 'project area' refers to the area where the developer wants to focus its development activities (refer to plan).

Phase 1 studies refer to surveys using various sources of data and limited field walking in order to establish the presence of all possible types of heritage resources in any given area

.

1 INTRODUCTION

1.1. Background

Most heritage sites occur within communities, whose development should not be neglected in the name of heritage preservation but should be encouraged and embraced within legal and adaptive management frameworks (Carter and Grimwade 1997; Salafsky *et al* 2001). This case is true for the entire project area, which hosts palaeontological, archaeological, historical, natural and contemporary heritage resources (see sensitivity map). The purpose of this AIA/HIA Study is to assess presence/absence of heritage resources on the proposed Liquefied Petroleum Gas (LPG) storage facility site. The study was designed to ensure that any significant archaeological or cultural physical property or sites are located and recorded, and site significance is evaluated to assess the nature and extent of expected impacts from the proposed storage facility development. The assessment includes recommendations to manage the expected impact of the proposed Liquefied Petroleum Gas (LPG) storage facility development. The report includes recommendations to guide heritage authorities in making appropriate decision with regards to the environmental approval process for the proposed Liquefied Petroleum Gas (LPG) storage facility development. The report concludes with detailed recommendations on heritage management associated with the proposed Gas storage facility development.

ISS an independent consulting firm, conducted an assessment, research and consultations required for the preparation of the AIA/HIA report in accordance with its obligations set in the NHRA, as well as the environmental management legislations.

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

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

1.2. Description of the proposed project

Tsogolo Energy (Pty) Ltd is proposing to construct a Liquefied Petroleum Gas (LPG) storage facility, before on Erf

79 Marelden Extension 5 Township within eMalahleni Local Municipality, Mpumalanga Province. The area extent of the proposed gas storage facility is approximated to be 0.888ha. The site will be accessed through existing unpaved access roads. The size of the proposed depot is enough to operate successfully, with adequate manoeuvring space and parking space which will prevent obstruction of light and heavy vehicles entering and existing the depot.

The proposed development entails the following:

- Two above ground storage tanks, each having a storage capacity of 45m³ (equating to a total of 90m³). The tanks will be filled up to 80% implying that only 72 m³ LPG will be stored on site and thus will not exceed 80 m³)
- Office space
- Parking Area
- Shaded security area
- Loading Platform
- Prop Platform
- Bulk off-loading
- Two gas Pumps
- Access roads

1.4. Location of the proposed development

The proposed project is located on the footprint of the Witbank on Erf 79 Marelden Extension 5 Township situated within eMalahleni Local Municipality, Mpumalanga Province, South Africa. (See Figure 1).

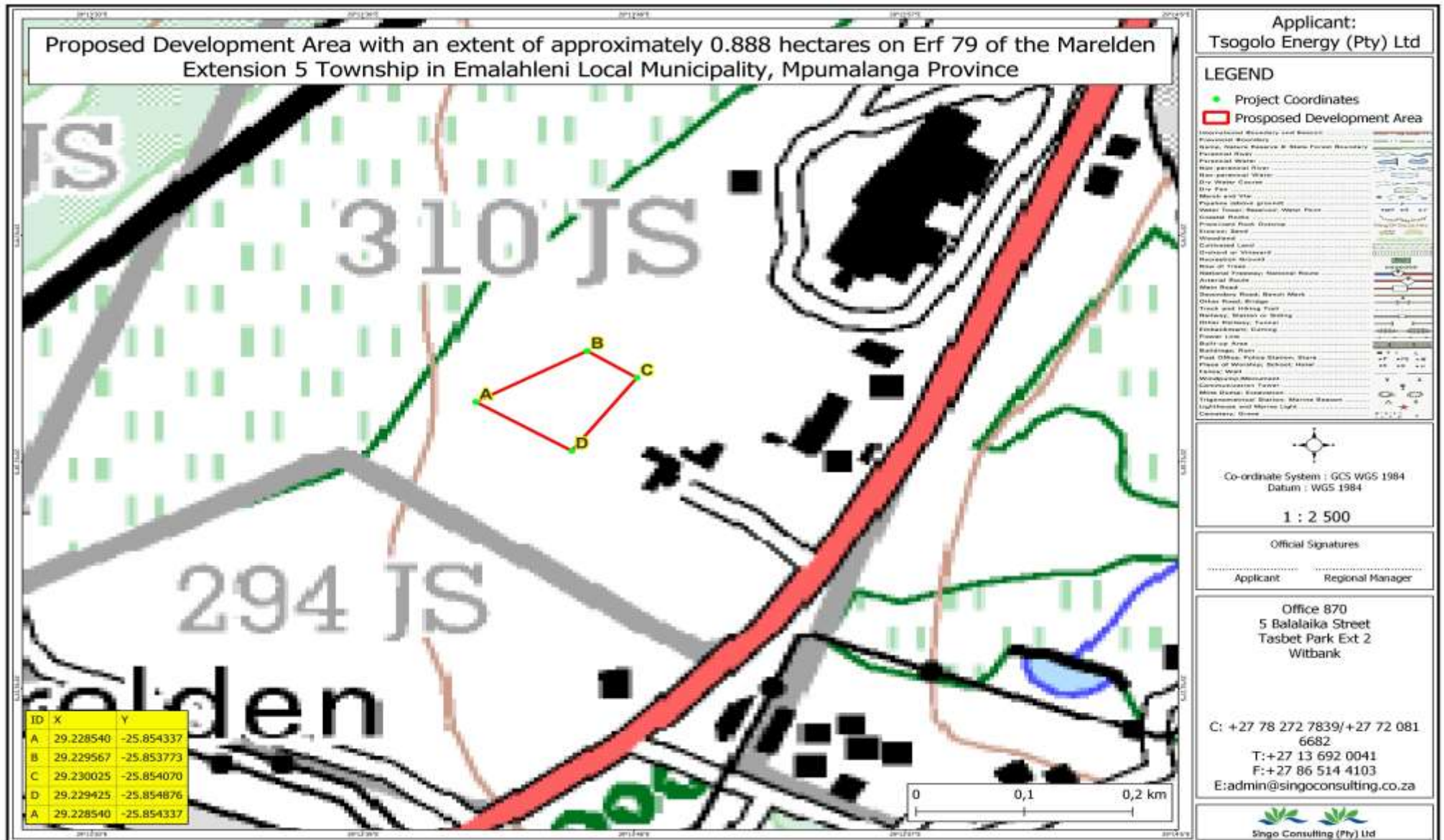


Figure 1: Proposed Liquefied Petroleum Gas (LPG) storage facility (Singo Consulting (Pty) Ltd 2022)

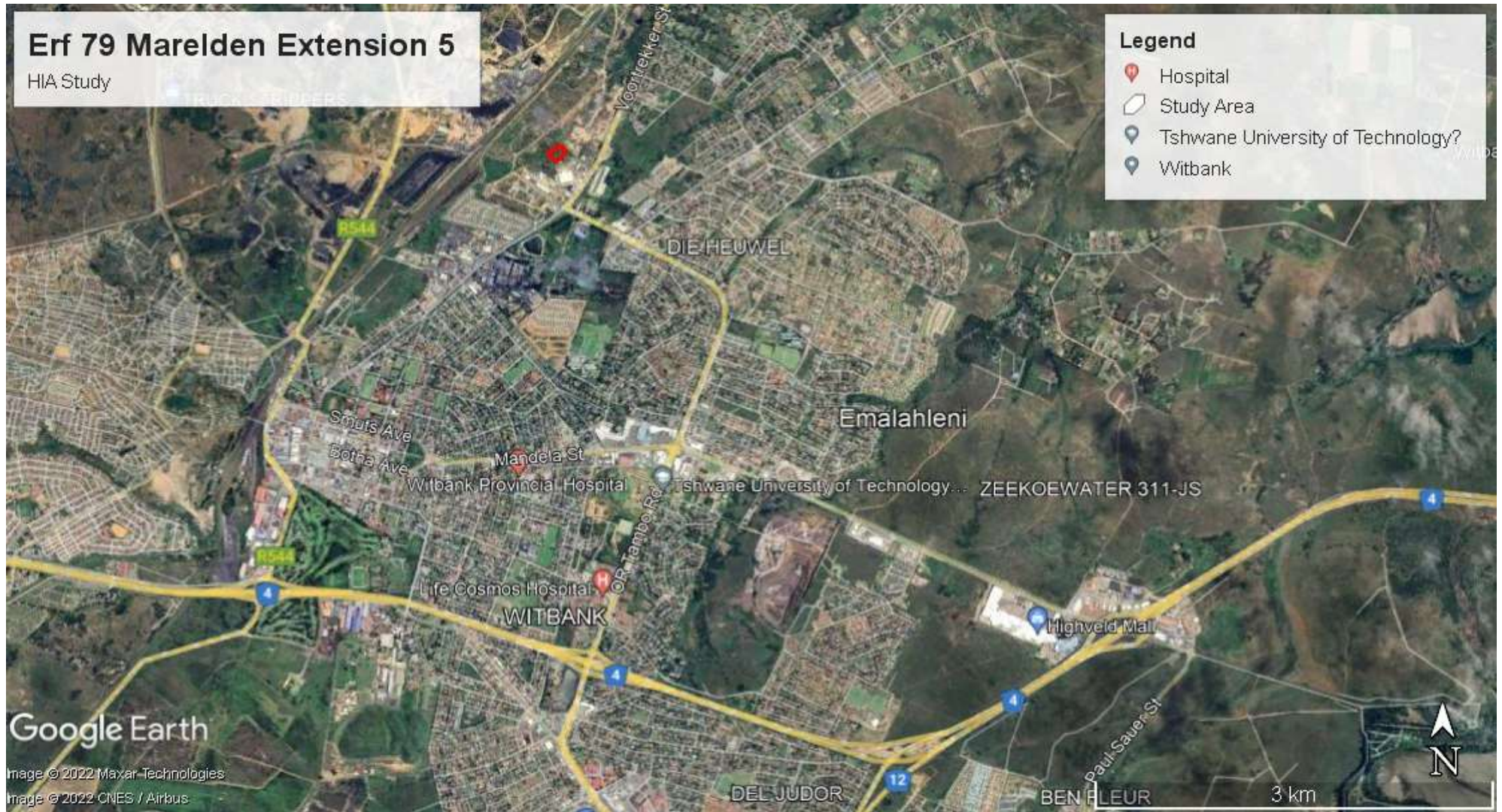


Figure 2: Locality Map of the proposed development site (ISS (Pty) Ltd 2022)



Figure 3: Proposed development site (ISS (Pty) Ltd 2022)

2 LEGAL REQUIREMENTS

Relevant pieces of legislation are applicable to the present study and are presented in this section. Under the NHRA, Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002), as amended (MPRDA), and the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended (NEMA) and the Environmental Impact Assessment (A) Regulations of 2014, as amended, an AIA/HIA is required as a specialist sub-section of the impact assessment.

Heritage management and conservation in South Africa is governed by the NHRA and falls under the overall jurisdiction of the SAHRA and its Provincial Heritage Resources Authorities (PHRAs), ECPHRA in this case. There are different sections of the NHRA that are relevant to this study. The proposed development is a listed activity in terms of Section 38 of the NHRA which stipulates that the following development categories require an HIA to be conducted by an independent heritage management consultant:

- Construction of a road, **wall**, powerline, **pipeline**, canal **or other linear form of development or barrier exceeding 300m in length**
- Construction of bridge or similar structure exceeding 50m in length
- Development or other activity that will change the character of a site -
 - **Exceeding 5 000 square metres (m²)**
 - Involving three or more existing erven or subdivisions
 - Involving three or more erven or divisions that have been consolidated within past five years
 - Rezoning of site exceeding 10 000m²
 - The costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority
- Any other development category, public open space, squares, parks, recreation grounds

Thus, any person undertaking any development in the above categories, must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development. Section 38(2)(a) of the NHRA also requires the submission of a HIA report for authorization purposes to the responsible heritage resources agencies (SAHRA/PHRA).

Related to Section 38 of the NHRA are Sections 34, 35, 36 and 37. Section 34 stipulates that no person may alter, damage, destroy, relocate etc. any building or structure older than 60 years, without a permit issued by SAHRA or a provincial heritage resources authority. Section 35(4) of the NHRA stipulates that no person may, without a permit issued by SAHRA, destroy, damage, excavate, alter or remove from its original position, or collect, any archaeological material or object. This section may apply to any significant archaeological sites that may be

discovered before or during construction. This means that any chance find must be reported to SAHRA or Mpumalanga PHRA, who will assist in investigating the extent and significance of the finds and inform about further actions. Such actions may entail the removal of material after documenting the find site or mapping of larger sections before destruction.

Section 36(3) of the NHRA also stipulates that no person may, without a permit issued by the SAHRA, destroy, damage, alter, exhume or remove from its original position or otherwise disturb any grave or burial ground older than 60 years, which is situated outside a formal cemetery administered by a local authority. This section may apply in case of the discovery of chance burials, which is unlikely. The procedure for reporting chance finds also applies to the likely discovery of burials or graves by the developer or his contractors. Section 37 of the NHRA deals with public monuments and memorials which may exist in the proposed project area.

In addition, the EIA Regulations promulgated in terms of NEMA determine that any environmental reports will include cultural (heritage) issues. The EIA Regulations in terms of Chapter 5 of the NEMA provide for an assessment of development impacts on the cultural (heritage) and social environment and for Specialist Studies in this regard. The end purpose of such a report is to alert the applicant and, the environmental consultant, SAHRA and/or Mpumalanga PHRA and interested and affected parties about existing heritage resources that may be affected by the proposed development, and to recommend mitigatory measures aimed at reducing the risks of any adverse impacts on these heritage resources.

2.1. Assessing the Significance of Heritage Resources

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

Not all sites are equally significant and not all are worthy of equal consideration and management. The significance of a place is not fixed for all time, and what is considered of significance at the time of assessment may change as similar items are located, more research is undertaken, and community values change. This does not lessen the value of the heritage approach but enriches both the process and the long-term outcomes for future generations as the nature of what is conserved and why, also changes over time (Pearson and Sullivan 1995:7). This assessment of the Indigenous cultural heritage significance of the Site of Interest as its environments of the study area will be

based on the views expressed by the traditional authority and community representatives, consulted documentary review and physical integrity.

African indigenous cultural heritage significance is not limited to items, places or landscapes associated with pre-European contact. Indigenous cultural heritage significance is understood to encompass more than ancient archaeological sites and deposits, broad landscapes, and environments. It also refers to sacred places and story sites, as well as historic sites, including mission sites, memorials, and contact sites. This can also refer to modern sites with particular resonance to the indigenous community.

Archaeological sites, as defined by the NHRA are places in the landscape where people once lived in the past – generally more than 60 years ago – and have left traces of their presence behind. In South Africa, archaeological sites include hominid fossil sites, places where people of the Earlier, Middle and Later Stone Age lived in open sites, river gravels, rock shelters and caves, Iron Age sites, graves, and a variety of historical sites and structures in rural areas, towns and cities. Palaeontological sites are those with fossil remains of plants and animals where people were not involved in the accumulation of the deposits. The basic principle of cultural heritage conservation is that archaeological and other heritage sites are valuable, scarce and non-renewable. Many such sites are unfortunately lost on a daily basis through infrastructure developments such as powerlines, roads and other destructive economic activities such as mining and agriculture. It should be noted that once archaeological sites are destroyed, they cannot be replaced as site integrity and authenticity is permanently lost. Archaeological heritage contributes to our understanding of the history of the region and of our country and continent at large. By preserving links with our past, we may be able to appreciate the role past generations have played in the history of our country and the continent at large.

2.2. Categories of Significance

Rating the significance of archaeological sites, and consequently grading the potential impact on the resources is linked to the significance of the site itself. The significance of an archaeological site is based on the amount of deposit, the integrity of the context, the kind of deposit and the potential to help answer present research questions. Historical structures are defined by Section 34 of the NHRA while other historical and cultural significant sites, places and features, are generally determined by community preferences. The guidelines as provided by the NHRA in Section 3, with special reference to subsection 3 are used when determining the cultural significance or other special value of archaeological or historical sites. In addition, ICOMOS (the Australian Committee of the International Council on Monuments and Sites) highlights four cultural attributes, which are valuable to any given culture:

2.3. Aesthetic Value:

Aesthetic value includes aspects of sensory perception for which criteria can and should be stated. Such criteria include consideration of the form, scale, colour, texture and material of the fabric, the general atmosphere associated with the place and its uses and also the aesthetic values commonly assessed in the analysis of landscapes and townscape.

2.4. Historical Value:

Historic value encompasses the history of aesthetics, science and society and therefore to a large extent underlies all of the attributes discussed here. Usually, a place has historical value because of some kind of influence by an event, person, phase or activity.

2.5. Scientific Value:

The scientific or research value of a place will depend upon the importance of the data involved, on its rarity, quality and on the degree to which the place may contribute further substantial information.

2.6. Social Value:

Social value includes the qualities for which a place has become a focus of spiritual, political, national or other cultural sentiment to a certain group. It is important for heritage specialist input in the impact assessment process to take into account the heritage management structure set up by the NHRA. It makes provision for a 3-tier system of management including the SAHRA at a national level, PHRAs at a provincial and the local authority. The NHRA makes provision for two types or forms of protection of heritage resources; i.e. formally protected and generally protected sites:

2.7. Formally Protected Sites

- Grade 1 or national heritage sites, which are managed by SAHRA
- Grade 2 or provincial heritage sites, which are managed by the PHRAs.
- Grade 3 or local heritage sites.

2.8. General Protection

- Human burials older than 60 years.
- Archaeological and palaeontological sites.
- Shipwrecks and associated remains older than 70 years.
- Structures older than 60 years.

The certainty of prediction is definite, unless stated otherwise and if the significance of the site is rated high, the significance of the impact will also result in a high rating. The same rule applies if the significance rating of the site is low. The significance of archaeological sites is generally ranked into the following categories:

2.9. Significance Rating Action

No significance: sites that do not require mitigation.

Low significance: sites, which may require mitigation.

2a. Recording and documentation (Phase 1) of site; no further action required

2b. Controlled sampling (shovel test pits, auguring), mapping and documentation (Phase 2 investigation); permit required for sampling and destruction

Medium significance: sites, which require mitigation.

3. Excavation of representative sample, C14 dating, mapping and documentation (Phase 2 investigation); permit required for sampling and destruction [including 2a & 2b]

High significance: sites, where disturbance should be avoided.

4a. Nomination for listing on Heritage Register (National, Provincial or Local) (Phase 2 & 3 investigation); site management plan; permit required if utilised for education or tourism

High significance: Graves and burial places

4b. Locate demonstrable descendants through social consulting; obtain permits from applicable legislation, ordinances and regional by-laws; exhumation and reinternment [including 2a, 2b & 3]

Furthermore, the significance of archaeological sites was based on six 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),
- Social value,
- Uniqueness, and
- Potential to answer current and future research questions.

An important aspect in assessing the significance and protection status of a heritage resource is often whether or not the sustainable social and economic benefits of a proposed development outweigh the conservation issues at stake. When, for whatever reason the protection of a heritage site is not deemed necessary or practical, its research potential must be assessed and mitigated in order to gain data /information, which would otherwise be lost.

Table 1: Evaluation of the proposed development as guided by the criteria in NHRA, MPRDA and NEMA

ACT	Stipulation for developments	Requirement details
NHRA Section 38	Construction of road, wall, powerline, pipeline, canal or other linear form of development or barrier exceeding 300m in length	Yes
	Construction of bridge or similar structure exceeding 50m in length	No
	Development exceeding 5 000m ²	No
	Development involving three or more existing erven or subdivisions	No
	Development involving three or more erven or divisions that have been consolidated within past five years	No
	Rezoning of site exceeding 10 000m ²	No
	Any other development category, public open space, squares, parks, recreation grounds	Yes
NHRA Section 34	Impacts on buildings and structures older than 60 years	Subject to identification during Phase 1 walk down survey
NHRA Section 35	Impacts on archaeological and paleontological heritage resources	Subject to identification during Phase 1 walk down survey
NHRA Section 36	Impacts on graves	Subject to identification during Phase 1
NHRA Section 37	Impacts on public monuments	No
Chapter 5 (21/04/2006) NEMA	HIA is required as part of the impact assessment	Yes
Section 39(3)(b) (iii) of the MPRDA	AIA/HIA is required as part of the impact assessment	Yes

2.10. Other relevant legislations

The Human Tissue Act, 1983

Human Tissue Act, 1983 (Act No. 65 of 1983), as amended (HTA) and Ordinance on the Removal of Graves and Dead Bodies, 1925 (Ordinance No. 7 of 1925), as amended, states that Graves 60 years or older are heritage resources and fall under the jurisdiction of both the NHRA and the HTA. However, graves younger than 60 years are specifically protected by the HTA and the Ordinance on the Removal of Graves and Dead Bodies, 1925 as well as any local and regional provisions, laws and by-laws. Such burial places also fall under the jurisdiction of the National Department of Health and the Provincial Health Departments. Approval for the exhumation and re-burial must be obtained from the relevant Provincial Member of the Executive Committee (MEC) as well as the relevant Local Authorities.

2.11. Terms of Reference

The author was instructed to conduct an AIA/HIA study addressing the following issues:

- Archaeological and heritage potential of the proposed Liquefied Petroleum Gas (LPG) storage facility development site including any known data on affected areas.
- Provide details on methods of study; potential and recommendations to guide the SAHRA/MPHRA to make an informed decision in respect of authorisation of the proposed gas storage facility.
- Identify all objects, sites, occurrences, and structures of an archaeological or historical nature (cultural heritage sites) located in and around the proposed gas storage facility site;
- Assess the significance of the cultural resources in terms of their archaeological, historical, scientific, social, religious, aesthetic and tourism value.
- Describe the possible impact of the proposed Liquefied Petroleum Gas (LPG) storage facility on these cultural remains, according to a standard set of conventions.
- Propose suitable mitigation measures to minimize possible negative impacts on the cultural resources;
- Review applicable legislative requirements.

PHOTOGRAPHIC PRESENTATION OF THE PROJECT SITE



Plate 1: Photo 1: Showing access road into the proposed development site (Photograph © by Author 2022).



Plate 2: Photo 2: View of dense grass cover within the proposed development site (Photograph © by Author 2022).



Plate 3: Photo 3: View of the proposed development site (Photograph © by Author 2022).



Plate 4: Photo 4: Showing dense grass cover within the development site. Note dense vegetation cover compromises the visibility of archaeological material (Photograph © by Author 2022)



Plate 5: Photo 5: View of the proposed development site. Note the illegal dumping of rocks within the development site (Photograph © by Author 2022)



Plate 6: Photo 6: Showing cut-down trees within the proposed development site (Photograph © by Author 2022).



Plate 7: Photo 7: View of the proposed development site. Note the existing building in the background (Photograph © by Author 2022).



Plate 8: Photo 8: View of the proposed development site (Photograph © by Author 2022).



Plate 9: Photo 9: View of the proposed development site (Photograph © by Author 2022).



Plate 10: Photo 10: View of dense vegetation cover within the proposed development site (Photograph © by Author 2022).



Plate 11: Photo 11: View of previously cleared up section within the proposed development site (Photograph © by Author 2022).



Plate 12: Photo 12: View of dense vegetation cover within the proposed development site (Photograph © by Author 2022).



Plate 13: Photo 13: View of access roads and existing buildings within the vicinity of the proposed development site (Photograph © by Author 2022).



Plate 14: Photo 14: View of dense vegetation cover within the proposed development site (Photograph © by Author 2022).

3 METHODOLOGY

Relevant published and unpublished sources were consulted in generating desktop information for this report. This included online databases such as the United Nations Educational, Scientific and Cultural Organization (UNESCO) website, Google Earth, Google Scholar and South African Heritage Resources Information System (SAHRIS). Previous HIA in the project area were also consulted. A number of published works on the archaeology, history and palaeontology were also consulted. This included dedicated archaeological, paleontological and geological works by (Breutz 1956; 1968; 1987; Button 1971; Clarck 1971; Eriksson *et al* 1975; Bertrand and Eriksson 1977; Humphreys 1978; Humphreys and Thackeray 1983; Beaumont and Vogel 1984; Beaumont and Morris 1990; Beaumont 1999; Holmgren *et al* 1999; Johnson *et al* 1997; Peabody 1954; Shillington 1985; Wills 1992; Young 1934; 1940, Huffman 2007, Mason 1962). Thus, the proposed Liquefied Petroleum Gas (LPG) storage facility development was considered in relation to the broader landscape, which is a key requirement of the International Council on Monuments and Sites (ICOMOS) Guidelines.

This document aims at providing an informed heritage-related opinion about the Liquefied Petroleum Gas (LPG) storage facility. This is usually achieved through a combination of a review of any existing literature and a basic site inspection. As part of the desktop study, published literature and cartographic data, as well as archival data on heritage legislation, the history and archaeology of the area were studied. The desktop study was followed by field surveys. The field assessment was conducted according to generally accepted AIA/HIA practices and aimed at locating all possible objects, sites and features of cultural significance on the development footprint. Initially a drive-through was undertaken around the proposed Liquefied Petroleum Gas (LPG) storage facility site as a way of acquiring the archaeological impression of the general area. This was then followed by a walk down survey in the study area, with a handheld Global Positioning System (GPS) for recording the location/position of each possible site. Detailed photographic recording was also undertaken where relevant. The findings were then analysed in view of the proposed gas storage facility development in order to suggest further action. The result of this investigation is a report indicating the presence/absence of heritage resources and how to manage them in the context of the proposed Liquefied Petroleum Gas (LPG) storage facility development.

3.1 The Fieldwork surveys

The fieldwork survey was undertaken on the 30 April 2022. The main focus of the survey involved a pedestrian survey which was conducted within the proposed development site. The pedestrian survey focused on parts of the project area where it seemed as if disturbances may have occurred in the past, for example bald spots in the grass veld; stands of grass which are taller than the surrounding grass veld; the presence of exotic trees; evidence for building rubble, and ecological indicators such as invader weeds. The literature survey suggests that prior to the 20th century modern residential and on-going infrastructure developments; the general area where the proposed development is located would have been a rewarding region to locate heritage resources related to Stone Age and particularly Iron Age and historical sites (Bergh 1999). However, the situation today is completely different. The

study area now lies on a clearly modified landscape that has been cleared of vegetation and occupied by residential units (Plates 1-9).

3.2 Visibility and Constraints

The project site is accessible through roads and streets. However, visibility of surface archaeological remains was compromised by dense grass cover and construction rubble which made it difficult to identify archaeological resources in their original places (see Plate 1 to 14). In addition, due to the subterranean nature of cultural remains this report should not be construed as a record of all archaeological and historic sites in the area.

3.3 Assumptions and Limitations

The investigation has been influenced by the unpredictability of buried archaeological remains (absence of evidence does not mean evidence of absence) and the difficulty in establishing intangible heritage values. It should be noted that archaeological deposits (including graves and traces of archaeological heritage) usually occur below the ground level. Should artefacts or skeletal material be revealed at the site during construction, such activities should be halted immediately, and a competent heritage practitioner and SAHRA must be notified in order for an investigation and evaluation of the find(s) to take place (see NHRA, Section 36(6)). Recommendations contained in this document do not exempt the applicant from complying with any national, provincial and municipal legislation or other regulatory requirements, including any protection or management or general provision in terms of the NHRA. The author assumes no responsibility for compliance with conditions that may be required by SAHRA in terms of this report.

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

The proposed project activities will be limited to specific right of site as detailed in the development layout.

- The construction team to provide link and access to the proposed site by using the existing access roads and there will be no construction beyond the demarcated site.
- This study did not include any ethnographic and oral historical studies, nor did it investigate the settlement history of the area.

3.4 Consultations

Public consultations are being conducted by the EAP and issues raised by Interested and Affected parties will be presented during Specialist integration meetings for the project. Issues relating to heritage will be forwarded to the heritage specialist.

4 CULTURE HISTORY BACKGROUND OF THE PROJECT AREA

4.1 Archaeological Context

In order to place the project area (eMalahleni) in archaeological and historical context, primary and secondary sources were consulted. Ethnographical and linguistic studies by early researchers such as Theal and Van Warmelo provide insights on the cultural groups who lived in and around the project area since ca 1600. Historic and academic sources by Küsel and Bergh, Makhura, Delius, and Webb were also consulted. There are no museums in the eMalahleni and Middelburg towns which could be consulted, and no historical information was available at the municipalities or information centres (Van Wyk Rowe 2012). Very little contemporary research has been done on prehistoric African settlements in the study area, and according to Bergh, there are no recorded sites that date from the Stone Age, (including Rock paintings or engravings), Early or Later Iron Age. The topographical map 2529CC Witbank, shows that the project area is highly disturbed with cultivated land, residential and mining developments as well as other infrastructure development.

4.2 Stone Age Archaeology

Stone Age sites are marked by stone artefacts that are found scattered on the surface of the earth or as parts of deposits in caves and rock shelters. The Stone Age is divided into the Early Stone Age (covers the period from 2.5 million years ago to 250 000 years ago), the Middle Stone Age (refers to the period from 250 000 years ago to 22 000 years ago) and the Late Stone Age (the period from 22 000 years ago to 200 years ago). The Later Stone Age is also associated with rock paintings and engravings which were done by the San, Khoi Khoi and in more recent times by Iron Age farmers. Heritage surveys up to now have recorded few outstanding Stone Age sites, rock paintings and engravings in the Eastern Highveld - primarily as a result of limited extensive archaeological surveys. Stone tools have been recorded around some of the pans which occur on the Eastern Highveld.

In the larger geographical area, there is material manifestation of Stone Age people but generally, Highveld area did not attract much of habitation in these early times due to lack of rock-shelters and domination of exposed environments. Thus, it is mostly in the vicinity of large watercourses and lower parts of mountains that some ESA (~ 2.6 million to 250 000 years ago) materials (crude chopper and other unifacial tools of the Oldowan industry and the characteristic Acheulian hand axes and cleavers) and MSA (~ 250 000 to 40-25 000 years ago) materials are generally found. The MSA is a flake-technological stage characterized by faceted platforms, produced from prepared cores, as distinct from the core tool-based ESA technology. More technological and behavioural changes than those witnessed in the MSA, occurred during the LSA (~ 40-25 000, to recently, 100 years ago), which is also associated with Homo Sapiens (Barham and Mitchell 2008). For the first time we get evidence of people's activities derived from material other than stone tools (ostrich eggshell beads, ground bone arrowheads, small, bored stones

and wood fragments) (Deacon and Deacon 1999). The LSA people are also credited with the production of rock art (engravings and paintings), which is an expression of their complex social and spiritual beliefs (Parkington et al. 2008). However, it is important to note that no Stone Age materials were recorded during the field walking, perhaps due to the presence of tall grass. Nonetheless, it is possible to encounter isolated finds of these objects in the study area, even though these would most likely be out of context due to the modern disturbances.

4.3 Iron Age Archaeology

The Iron Age of the Mpumalanga region dates back to the 5th Century AD when the Early Iron Age (EIA) proto-Bantu-speaking farming communities began arriving in this region which was then occupied by hunter-gatherers. These EIA communities are archaeologically referred to as the Mzonjani Facies of the Urewe EIA Tradition (Huffman, 2007: 127-9). They occupied the foothills and valley lands along the general Indian Ocean coastland introducing settled life, domesticated livestock, crop production and the use of iron (also see Maggs 1984a; 1984b; Huffman 2007). Alongside the Urewe Tradition was the Kalundu Tradition whose EIA archaeological sites have been recorded along the Mpumalanga areas. From AD 650 to 750 the EIA sites in the region were classified as the Msuluzi facies which was replaced by the Ndongondwane and Ntsekane facies from AD 750 to 950 and AD 950 to 1050 respectively (Huffman, 2007).

By 1050 AD proto-Nguni Bantu-speaking groups associated with the Late Iron Age (LIA) called the Blackburn sub-branch of the Urewe Tradition had arrived in the eastern regions of South Africa, including modern day Mpumalanga, migrating from the central African region of the Lakes Tanganyika and Victoria (Huffman 2007: 154-5). According to archaeological data available, the Blackburn facies ranged from AD 1050 to 1500 (ibid. p.155). The Mpumalanga and the Natal inland regions saw the development of the LIA Moor Park facies between AD 1350 and 1750. These archaeological facies are interpreted as representing inland migration by LIA Nguni speaking groups (Huffman 2007). Moor Park is associated with settlements marked by stonewalling. The period from AD 1300 to 1750 saw multiple Nguni dispersal from the coastland into the hinterland and eventually across the Drakensberg Escapement into central and eastern South Africa (ibid).

No Iron Age sites are indicated in a historical atlas around the town of Witbank, but this may only indicate a lack of research. The closest known Iron Age occurrences to the surveyed area are Late Iron Age sites that have been identified to the west of Bronkhorstspuit and in the vicinity of Bethal (Bergh 1999: 7-8). The good grazing and access water in the area would have provided a good environment for Iron Age people although building material seem to be reasonably scarce. One would therefore expect that Iron Age people may have utilized the area. This is the same reason why white settlers moved into this environment later on.

4.4 Historical Background

The Late Iron Age Nguni communities engaged in the Indian Ocean Trade exporting ivory and importing consumables such as cloth and glass beads. The exporting point was Delagoa. This brought the Nguni speaking community in touch with the Indo-Asian and first Europeans (Portuguese). It was the arrival of the Dutch and the English traders that opened up Delagoa Bay to more trade did the Nguni engaged in extensive trade with the international traders (Huffman 2007). From the late 1700s, trade in supply of meat to passing ship had increased substantially to an extent that by 1800 meat trade is estimated to have surpassed ivory trade. At the same time population was booming following the increased food production that came with the introduction of maize that became the staple food. Naturally, there were signs that population groups had to compete for resources especially along the east coastal regions. The KwaZulu Natal coastal region has a special place in the history of the region and country at large. This relates to the most referenced Mfecane (wandering hordes) period of tremendous insecurity and military stress which eventually affected the entire Southern Africa including the modern-day Mpumalanga area. Around the 1830s, the region also witnessed the massive movements associated with the Mfecane. The causes and consequences of the Mfecane are well documented elsewhere (e.g. Hamilton 1995; Cobbing 1988). In this context, new African kingdoms emerged such as the Zulu Kingdom under Shaka in the second quarter of the 1800s AD. Military pressure from Zululand spilled onto the Highveld by at least 1821. Various marauding groups of displaced Sotho-Tswana moved across the plateau in the 1820s. Mzilikazi raided the plateau extensively between 1825 and 1837. For example, at the beginning of the 19th century, the Phuthing, a South Sotho group, stayed to the east of eMalahleni. During the Difaquane they fled to the south from the Ndebele of Mzilikazi who established several settlement complexes in Eastern Bankveld between Pretoria and Witbank (Bergh 1999: 10-11; 109).

At the same time the Boers trekked into this area in the 1830s. And throughout this time settled communities of Tswana people also attacked each other. As a result of this troubled period, Sotho-Tswana people concentrated into large towns for defensive purposes. Their settlements were built of stone because of the lack of trees in the project area. These stone-walled villages were almost always located near cultivatable soil and a source of water. Such sites are known to occur near Kriel (e.g., Pelsler, *et al* 2006) and to the south (Taylor 179). However stonewalled sites associated with Sotho Tswana clans have not been reported in the Witbank area as yet.

White farmers only settled in the Witbank area after 1850 (Bergh 1999: 16). One may therefore expect to find farm buildings, structures and objects from this period in time in the area. Many graveyards from this period have indeed been identified in surrounding areas during past surveys.

4.5 Mining History

The project is located within the historical town of Witbank. Witbank came into being as the railway line between Pretoria and Lourenço Marques which was built in 1894 passed close to where Witbank is located today. Witbank was established in 1903 on a farm known as Swartbos which belonged to Jacob Taljaard (Pistorius 2006, 2008). eMalahleni, formerly known as Witbank, is situated on the highveld of Mpumalanga, South Africa. The name Witbank is Afrikaans for “White Ridge” and is named after a white sandstone outcrop where wagon transport drivers rested. Witbank Colliery was established by Sameul Stanford and the Neumann group as Zeraatsfontein (Leraatsfontein) and the name Witbank was derived from a white quartz outcrop, which according to Thomas Bains, loomed like a wagon tent in the distance”. Samuel Stanford erected the first wood and iron building consisting of a shop and hotel at the new town laid by Witbank Colliery in 1903 and became a municipality in 1914. In 2006 the town was renamed eMalahleni, the Nguni word for “the place of coal”. eMalahleni is in the coal mining area with 22 collieries in an area no more that 40km in any direction (Pistorius 2008). There are also a number of power stations as well as a steel mill, Highveld Steel and Vanadium Corporation nearby, which all require coal (Van Warmelo, *Preliminary survey of the Bantu Tribes of South Africa*, 87-108). Witbank was established in 1890 and early attempts to exploit the coal deposits failed until the railway from Pretoria reached the area in 1894 (Pistorius 2008). The establishment of the NZASM railway line in the 1880s, linking Pretoria with Lourenço Marques and the world at large, brought much infra-structural and administrative development to the area. This railway line also became the scene of many battles during the Anglo-Boer *Heritage Impact Assessment Vlakfontein Mine War* and after the battle of Bakenlaagte (30 October 1901) the Clewer station served as hospital for the wounded British soldiers. A concentration camp was established near the Balmoral station, northwest of the study area (Cloete 2000). In line with the ‘scorched earth’ policy, most farmsteads were destroyed by the British during the latter part of the hostilities. Coal mining occurred only sporadically in the area. However, with the discovery of the Witwatersrand gold fields, the need for a source of cheap energy became important, and coal mining developed on a large scale in various regions. By 1899, at least four collieries were operating in the Middelburg-Witbank district, supplying the gold mining industry (Praagh 1906).

4.6 Intangible Heritage

As defined in terms of the UNESCO Convention for the Safeguarding of the Intangible Cultural Heritage (2003) intangible heritage includes oral traditions, knowledge and practices concerning nature, traditional craftsmanship and rituals and festive events, as well as the instruments, objects, artefacts and cultural spaces associated with group(s) of people. Thus, intangible heritage is better defined and understood by the particular group of people that uphold it. In the present study area, very little intangible heritage remains because no historically known groups occupied the study area and most of the original settler descendants moved away from the area.

4.7 SAHRIS Data Base and Impact Assessment Reports in the project area

Several archaeological and heritage studies were conducted within eMalahleni (Witbank) and its vicinity since 2002 and these presents the nature and heritage character of the area. The HIA conducted in the area also provide some predictive evidence regarding the types and ranges of heritage resources to be expected in the proposed project area: (see reference list for HIA reports). The studies include mining, water pipeline and powerline projects completed by Pistorius (2002, 2003, 2004, 2005, 2006a, 2006b, 2007, 2008, 2009, 2010, 2011, 2013, 2014). No sites were recorded, but the reports mention that structures older than 60 years occur in the area, Pelser and Van Vollenhoven (2010, 2011, 2014, 2015) for mining and infrastructure development survey also recorded no sites. Van Schalkwyk did extensive work in the project area mostly for mining and infrastructure developments for example Van Schalkwyk, (2002, 2004, 2006, 2006, and 2010). Other than burial sites and buildings older than 60 years the studies did not record any significant archaeological sites in the Witbank area.

5 RESULTS OF THE ARCHAEOLOGICAL/HERITAGE ASSESSMENT STUDY

The main cause of impacts to archaeological sites is direct, physical disturbance of the archaeological remains themselves and their contexts. It is important to note that the heritage and scientific potential of an archaeological site is highly dependent on its geological and spatial context. This means that even though, for example a deep excavation may expose buried archaeological sites and artefacts, the artefacts are relatively meaningless once removed from their original position.

The severe impacts are likely to occur during clearance and excavations within the proposed development site; indirect impacts may occur during movement of construction vehicles. The excavation for foundations and fence line posts will result in the relocation or destruction of all existing surface heritage material. Similarly, the clearing of access roads will impact material that lies buried below the surface. Since heritage sites, including archaeological sites, are non-renewable, it is important that they are identified, and their significance assessed prior to any construction activities at the site. It is important to note, that due to the localised nature of archaeological resources, that individual archaeological sites could be missed during the survey, although the probability of this is very low within the proposed Liquefied Petroleum Gas (LPG) storage facility site.

Further, archaeological sites and unmarked graves may be buried beneath the surface and may only be exposed during, clearance of the site and construction. The purpose of the AIA is to assess the sensitivity of the area in terms of archaeology and to avoid or reduce the potential impacts of the proposed development by means of mitigation measures (see appended Chance Find Procedure). The study concludes that the impacts will be negligible since

the site has been general disturbed. The following section presents results of the archaeological and heritage survey conducted within the proposed development project site.

Table 2: Summary of findings

Heritage resource	Status/Findings
Buildings, structures, places and equipment of cultural significance	None exist.
Areas to which oral traditions are attached or which are associated with intangible heritage	None exists on the study area
Historical settlements and townscapes	None exist within the study site
Landscapes and natural features of cultural significance	None
Archaeological and paleontological sites	No significant archaeological remains were recorded within the proposed development site
Graves and burial grounds	None exist within the development site
Movable objects	None
Overall comment	The proposed development site is significantly altered by ongoing residential occupation and retains low heritage significance.

5.1. Archaeological Sites

No archaeological sites were recorded during the field survey on the proposed gas storage facility site. However, even though no archaeological artefacts, features or structures were noted chances are that there could be archaeological material that may be buried underneath the surface, and they can only be exposed during work. The affected landscape is heavily degraded from previous and current land use activities (see Figure 1), this limited the chances of encountering significant *in situ* archaeological sites. Given the high sensitivity potential of the study area it is assumed that there was always a chance of finding archaeological remains. However, the chances of recovering significant archaeological materials were seriously compromised and limited due to previous agricultural and other destructive land use activities such access roads, agriculture fields and mining activities in the vicinity that already exist on the project area.

Based on the field study results and field observations, it is the considered opinion of the author that the receiving environment for the proposed Liquefied Petroleum Gas (LPG) storage facility site is low to medium potential to yield previously unidentified archaeological sites during subsurface excavations and construction work.

5.2. Buildings and Structures older than 60 years

The study did not record any buildings and structures within the proposed Liquefied Petroleum Gas (LPG) storage facility development footprint. In terms of Section 34 of the NHRA, the proposed development may be approved without any further investigation and mitigation.

5.3. Burial grounds and graves

Human remains and burials are commonly found close to archaeological sites; they may be found in abandoned and neglected burial sites or occur sporadically anywhere as a result of prehistoric activity, victims of conflict or crime. It is often difficult to detect the presence of archaeological human remains on the landscape as these burials, in most cases, are not marked on the surface. Archaeological and historical burials are usually identified when they are exposed through erosion, mining and earth moving activities for infrastructure developments such as powerlines and roads. In some instances, packed stones or stones may indicate the presence of informal pre-colonial burials.

The field survey did not record any burial site/ grave within the proposed Liquefied Petroleum Gas (LPG) storage facility site. However, the possibility of encountering previously unidentified burial sites is low within the proposed development site, should such sites be identified during construction, they are still protected by applicable legislations, and they should be protected (also see Appendixes for more details). In terms of Section 36 of the NHRA read together with the Human Tissue Act of 1983, the proposed project may be approved without any further investigation and heritage mitigation.

5.4. Significance valuation for Burial Ground, Historic Cemeteries, and Individual Graves

The significance of burial grounds and grave sites is closely tied to their age and historical, cultural, and social context. Nonetheless, every burial should be considered as of high socio-cultural significance protected by practices, a series of legislations, and municipal ordinances.

5.5. Public Monuments and Memorials

The survey did not identify any historical monument and public memorials within the proposed development site. There are no monuments or plaques within the proposed development site that are on the National Heritage or provincial list. In terms of Section 37 read together with Section 30 of the NHRA, the proposed project may be approved without any further investigation and mitigation.

5.6. Battle fields

No known battles or skirmishes associated with the Anglo-Boer war, colonial wars and the struggle against apartheid were fought on the proposed gas storage facility development site.

5.7. Archaeo-Metallurgy, Prehistoric Mining and Mining Heritage

No archeo-metallurgy and mining heritage traces were recorded within the proposed gas storage facility development site.

5.8. Visual impacts

The proposed Liquefied Petroleum Gas (LPG) storage facility site is not on the view shed of any listed heritage site.

5.9. Mitigation

The proposed gas storage facility application may be approved without further investigation or mitigation, however, bearing in mind that potential for chance finds is for ever present in the area. As such the chance find procedure will applies (see appended Chance finds procedure).

6 CUMMULATIVE IMPACTS

Cumulative impacts are defined as impacts that result from incremental changes caused by other past, present, or reasonably foreseeable actions together with the project. Therefore, the assessment of cumulative impacts for the proposed gas storage facility is considered the total impact associated with the proposed project when combined with other past, present, and reasonably foreseeable future developments projects. The impacts of the proposed gas storage facility were assessed by comparing the post-project situation to a pre-existing baseline. This section considers the cumulative impacts that would result from the combination of the proposed gas storage facility.

The current gas storage facility application will see the entire site being destroyed and will have significant impact on the visual and sense of place. This gas storage facility combined with other proposed activities will effectively transform the natural invitations area. The gas storage facility and other proposed infrastructure developments will have a combined visual impact on the landscape. The cumulative impact will negatively affect the landscape quality of the site. In the long run the accumulative impact will be of high significance in terms of its potential to change the characteristics and quality of the landscape in the long run. The field survey focused on potential LIA sites, historical buildings and structures as well as burial grounds and graves.

7 ASSESSMENT OF SIGNIFICANCE

7.1. Assessment Criteria

An impact can be defined as any change in the physical-chemical, biological, cultural and/or socio-economic environmental system that can be attributed to human activities related to alternatives under study for meeting a project need. The significance of the aspects/impacts of the process will be rated by using a matrix derived from Plomp (2004) and adapted to some extent to fit this process. These matrixes use the consequence and the likelihood of the different aspects and associated impacts to determine the significance of the impacts.

The significance of the impacts will be determined through a synthesis of the criteria below:

Table 3: Criteria Used for Rating of Impacts

Nature of the impact (N)		
Positive	+	Impact will be beneficial to the environment (a benefit).
Negative	-	Impact will not be beneficial to the environment (a cost).
Neutral	0	Where a negative impact is offset by a positive impact, or mitigation measures, to have no overall effect.
Magnitude(M)		
Minor	2	Negligible effects on biophysical or social functions / processes. Includes areas / environmental aspects which have already been altered significantly and have little to no conservation importance (negligible sensitivity*).
Low	4	Minimal effects on biophysical or social functions / processes. Includes areas / environmental aspects which have been largely modified, and / or have a low conservation importance (low sensitivity*).
Moderate	6	Notable effects on biophysical or social functions / processes. Includes areas / environmental aspects which have already been moderately modified and have a medium conservation importance (medium sensitivity*).
High	8	Considerable effects on biophysical or social functions / processes. Includes areas / environmental aspects which have been slightly modified and have a high conservation importance (high sensitivity*).
Very high	10	Severe effects on biophysical or social functions / processes. Includes areas / environmental aspects which have not previously been impacted upon and are pristine, thus of very high conservation importance (very high sensitivity*).
Extent (E)		
Site only	1	Effect limited to the site and its immediate surroundings.
Local	2	Effect limited to within 3-5 km of the site.
Regional	3	Activity will have an impact on a regional scale.
National	4	Activity will have an impact on a national scale.
International	5	Activity will have an impact on an international scale.
Duration (D)		

Immediate	1	Effect occurs periodically throughout the life of the activity.
Short term	2	Effect lasts for a period 0 to 5 years.
Medium term	3	Effect continues for a period between 5 and 15 years.
Long term	4	Effect will cease after the operational life of the activity ther because of natural process or by human intervention.
Permanent	5	Where mitigation there by natural process or by human intervention will not occur in such a way or in such a time span that the impact can be considered transient.
Probability of occurrence (P)		
Improbable	1	Less than 30% chance of occurrence.
Low	2	Between 30 and 50% chance of occurrence.
Medium	3	Between 50 and 70% chance of occurrence.
High	4	Greater than 70% chance of occurrence.
Definite	5	Will occur, or where applicable has occurred, regardless or in spite of any mitigation measures.

Once the impact criteria have been ranked for each impact, the significance of the impacts will be calculated using the following formula:

$$\text{Significance Points (SP)} = (\text{Magnitude} + \text{Duration} + \text{Extent}) \times \text{Probability}$$

The significance of the ecological impact is therefore calculated by multiplying the severity rating with the probability rating. The maximum value that can be reached through this impact evaluation process is 100 SP (points). The significance for each impact is rated as High (SP≥60), Medium (SP = 31-60) and Low (SP<30) significance as shown in the below.

Table 4: Criteria for Rating of Classified Impacts

Significance of predicted NEGATIVE impacts		
Low	0-30	Where the impact will have a relatively small effect on the environment and will require minimum or no mitigation and as such have a limited influence on the decision
Medium	31-60	Where the impact can have an influence on the environment and should be mitigated and as such could have an influence on the decision unless it is mitigated.
High	61-100	Where the impact will definitely have an influence on the environment and must be mitigated, where possible. This impact will influence the decision regardless of any possible mitigation.
Significance of predicted POSITIVE impacts		
Low	0-30	Where the impact will have a relatively small positive effect on the environment.
Medium	31-60	Where the positive impact will counteract an existing negative impact and result in an overall neutral effect on the environment.
High	61-100	Where the positive impact will improve the environment relative to baseline conditions.

Table 5: Impact Assessment Matrix

Impacts and Mitigation measures relating to the proposed Liquefied Petroleum Gas (LPG) storage facility project during construction Phase														
Activity/Aspect	Impact /	Aspect	Nature	Magnitude	Extent	Duration	Probability	Impact before mitigation	Mitigation measures	Magnitude	Extent	Duration	Probability	Impact after mitigation
Clearing and construction	Destruction of archaeological remains	Cultural heritage	-	6	1	1	2	16	<ul style="list-style-type: none"> Use chance find procedure to cater for accidental finds 	2	1	1	1	4
	Disturbance of graves	Cultural heritage	-	6	2	2	2	20	<ul style="list-style-type: none"> Provide for a 100m buffer zone from the burial site Chance finds procedure and heritage induction for workers 	2	1	1	1	4
	Disturbance of buildings and structures older than 60 years old	Operational	-	6	2	1	2	18	<ul style="list-style-type: none"> Mitigation is not required since no buildings and structures exist on the proposed development site 	4	1	1	1	4
Haulage	Destruction public monuments and plaques	Operational	-	2	1	1	1	4	<ul style="list-style-type: none"> Mitigation is not required because there are no public monuments within the proposed development site 	2	1	1	4	4

Based on the results of the Impact Assessment Matrix the proposed project is viable from a heritage perspective.

8 STATEMENT OF SIGNIFICANCE

8.1. Aesthetic Value

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

The proposed development site will be situated within an environment and associated cultural landscape, which, although developed by existing settlements, remains representative of the original historical environment and cultural landscape of this part of Mpumalanga Province. The local communities consider the project area a cultural landscape linked to their ancestors and history. However, the proposed development will not alter this aesthetic value in any radical way since it will add to the constantly changing and developing settlements.

8.2. Historic Value

Historic value encompasses the history of aesthetics, science, and society, and therefore to a large extent underlies all the terms set out in this section. A place may have historic value because it has influenced, or has been influenced by, an historic figure, event, phase, or activity. It may also have historic value as the site of an important event. For any given place, the significance will be greater where evidence of the association or event survives in situ, or where the settings are substantially intact, than where it has been changed or evidence does not survive. However, some events or associations may be so important that the place retains significance regardless of subsequent treatment.

8.3. Scientific value

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

8.4. Social Value

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

9 DISCUSSIONS

Various archaeologist and heritage specialists conducted several Phase 1 Archaeological/ Heritage studies for various infrastructure developments in the project area since 2006. The current study should be read in conjunction with previous Phase 1 Impact Studies conducted in the proposed project area. Although these studies recorded sites of significance for example Kruger, (2016), (Kusel (2003, 2008), Van Schalkwyk (2011a, 2011b, 2012) and Pistorius (2011, 2012) the recorded sites are far from the current proposed site. The lack of confirmable archaeological sites recorded during the current survey is thought to be a result of two primary interrelated factors:

- That proposed Liquefied Petroleum Gas (LPG) storage facility development is located within a degraded area and have reduced sensitivity for the presence of high significance physical cultural site remains, be they archaeological, historical, or burial sites, due to previous disturbances resulting from developments and other land uses in the project area.
- Limited ground surface visibility on sections of the proposed development that were not cleared at the time of the study may have impeded the detection of other physical cultural heritage site remains, or archaeological signatures immediately associated with the Gas storage facility activities. It should be borne in mind that the absence of confirmable and significant archaeological cultural heritage site is not evidence in itself that such sites did not exist within the proposed project site.

Based on the significance assessment criterion employed for this report, the proposed development site was rated **low** from an archaeological perspective, However, it should be noted that significance of the sites of Interest is not limited to presence or absence of physical archaeological sites. Significant archaeological remains may be unearthed during construction. (See appended chance find procedure).

10 RECOMMENDATIONS

The study did not find any permanent barriers to the proposed Liquefied Petroleum Gas (LPG) storage facility. It is the considered opinion of the authors that the proposed Liquefied Petroleum Gas (LPG) storage facility may be approved as planned from a heritage perspective, provided that mitigation measures are implemented if and when required. The following recommendations are based on the results of the AIA/HIA research, cultural heritage background review, site inspection and assessment of significance.

- The proposed Liquefied Petroleum Gas (LPG) storage facility application may be approved to proceed as planned under observation that project work does not extend beyond the surveyed site.
- Should chance archaeological materials or human burial remains be exposed during subsurface excavation work on any section of the proposed development laydown sites, work should cease on the

affected area and the discovery must be reported to the heritage authorities immediately so that an investigation and evaluation of the finds can be made. The overriding objective, where remedial action is warranted, is to minimize disruption in construction scheduling while recovering archaeological and any affected cultural heritage data as stipulated by the NHRA regulations.

- Subject to the recommendations herein made and the implementation of the mitigation measures and adoption of the project EMPr, there are no other significant cultural heritage resources barriers to the proposed Gas storage facility. The Heritage authority may approve the proposed Liquefied Petroleum Gas (LPG) storage facility to proceed as planned with special commendations to implement the recommendations here in made.
- If during development, operational or closure phases of this project, any person employed by the applicant, one of its subsidiaries, contractors and subcontractors, or service provider, finds any artefact of cultural significance, work must cease at the site of the find and this person must report this find to their immediate supervisor, and through their supervisor to the site manager.
- The Site Manager must then make an initial assessment of the extent of the find and confirm the extent of the work stoppage in that area before informing an archaeological practitioner.
- In the event that archaeological materials are unearthed, all construction activities within a radius of at least 30m of such indicator should cease and the area be demarcated by a danger tape. Accordingly, a professional archaeologist should be contacted immediately
- It is the responsibility of the applicant to protect the site from publicity (i.e., media) until a mutual agreement is reached.
- Noteworthy that any measures to cover up the suspected archaeological material or to collect any resources is illegal and punishable by law. In the same manner, no person may exhume or collect such remains, whether of recent origin or not, without the endorsement by MPHRA.
- The applicant is reminded that unavailability of archaeological materials (e.g., pottery, stone tools, remnants of stonewalling, graves, etc.) and fossils does not mean they do not occur, archaeological material might be hidden underground, and as such the client is reminded to take precautions during construction.
- Overall, impacts to heritage resources are not considered to be significant for the project receiving environment. It is thus concluded that the project may be cleared to proceed as planned subject to the Heritage Authority ensuring that detailed heritage monitoring procedures are included in the project EMPr for the construction phase, include chance archaeological finds mitigation procedure in the project EMPr (See Appendix 1).

- The findings of this report, with approval of the MPHRA, may be classified as accessible to any interested and affected parties within the limits of the laws.

11 CONCLUDING REMARKS

The literature review and field research confirmed that the project area is situated within a contemporary cultural landscape dotted with settlements and commercial developments with long local history. Field survey established that the proposed Liquefied Petroleum Gas (LPG) storage facility site was degraded by previous and current destructive land use patterns. In terms of the archaeology and heritage in respect of the proposed development site, there are no obvious 'Fatal Flaws' or 'No-Go' areas. The potential for chance finds is rated low, however, the applicant and contractors are advised to be diligent and observant during clearance and construction, should construction activities commence on the site. The procedure for reporting chance finds has clearly been laid out (see appended chance find procedure). This report concludes that the proposed Liquefied Petroleum Gas (LPG) storage facility application may be approved by SAHRA/MPHRA to proceed as planned subject to recommendations herein made and heritage monitoring plan being incorporated into the EMPr (also see Appendices). The mitigation measures are informed by the results of the AIA/HIA study and principles of heritage management enshrined in the NHRA.

12 BIBLIOGRAPHY

Barham, L. and Mitchell, P. 2008. The first Africans: African archaeology from the earliest toolmakers to most recent foragers. Cambridge: Cambridge university press

Bergh, J.S. (ed.) 1998. Geskiedenisatlas van Suid-Afrika. Die vier noordelike provinsies. Pretoria: J.L. van Schaik.

Cloete, P.G. 2000. The Anglo-Boer War: a Chronology. Pretoria: JP van der Walt

Deacon, H. J. and Deacon, J. 1999. Human beginnings in South Africa: Uncovering the secrets of the Stone Age. Cape Town: David Philip

Delius, P. 1984. The land belongs to us. Raven Press: Johannesburg.

Delius, P. 2007. Mpumalanga. History and Heritage. CTP Book Printers: Cape Town.

Delius, P. & Hay, M. 2009. Mpumalanga: an illustrated history. Johannesburg: The Highveld Press.

Delius, P & Schoeman, A. Revisiting Bokoni: Populating the stone ruins of the Mpumalanga Escarpment. In Swanepoel, N., Esterhuisen, A. & Bonner, P. (eds.) Five hundred years rediscovered. South African precedents and prospects, 135-167.

EMPR. 2006 (a). Addendum Landau Colliery Project Specific EMPR Addendum for the eMalahleni Water Reclamation Project. Unpublished report by Golder Associates.

EMPR. 2006 (b). Addendum Greenside Colliery Project Specific EMPR Addendum for the eMalahleni Water Reclamation Project. Unpublished report by Golder Associates

Erasmus, B.P.J. 1995. Oppad in Suid Afrika. 'n Gids tot Suid Afrika, Streek vir Streek. Jonathan Ball Uitgewers Bpk. Escom Annual Reports 1924-1971

Esterhuizen A. & Smith J. 2007. Stories in Stone. In Delius, P (ed). Mpumalanga History and Heritage. 41-64. Pietermaritzburg Kwa Zulu/Natal University Press.

Evers, T.M. 1981. The Iron Age in the Eastern Transvaal, South Africa. In Voight, E.A. (ed). Guide to archaeological sites in Northern and Eastern Transvaal. Pretoria: South African Association of Archaeologists, 64-109. Golden Jubilee 1923-1973

<http://www.eskom.co.za/sites/heritage/pages/witbank.aspx>. Accessed 20 May 2016

http://www.mpumalangahappenings.co.za/witbank_homepage.htm>, Accessed, 19 May 2016.

<http://www.shtetlinks.jewishgen.org/witbank/Whistory.htm>>, Accessed, Accessed 19 2016.

<http://www.cleanstreams.co.za/completed%20projects.doc>>. Accessed. 20 May 2016.

SAHRA, Burial sites, <Http://www.sahra.org.za/burial.htm>, Accessed, 20 May 2016.

Inskeep, R.R. 1978. The peopling of Southern Africa. David Philip: Cape Town.

Hartdegen, P. (ed.) 1988. Our building heritage. Halfway House: Ryll's Publishing Co.

Holm, S.E. 1966. Bibliography of South African Pre- and Protohistoric archaeology. Pretoria: J.L. van Schaik.

Huffman, T.N. 2007 Handbook to the Iron Age: The archaeology of pre-colonial farming societies in southern Africa. Scottville: University of KwaZulu Natal Press

Knudson, S.I 1978. Culture in retrospect. Chicago: Rand McNally College Publishing Company.

Küsel, U.S.2009. Survey of Heritage sites in the Olifants Catchment area

Maggs T.M. 2008. The Mpumalanga Escarpment settlements. In (Swanepoel, N., Esterhuisen, A. & Bonner, P. eds.) Five hundred years rediscovered. South African precedents and prospects. 169-182.

Makhura, T. 2007. Early inhabitants. In Delius, P. (ed). Mpumalanga. History and Heritage. University of Kwa Zulu Natal Press: Scottsville.

Makura, T. 2007. The pre-colonial histories of Mpumalanga communities. In Delius, P (ed). Mpumalanga History and Heritage. 91-136. Pietermaritzburg Kwa Zulu/Natal University Press.

Mason, R. 1962. Prehistory of the Transvaal. Johannesburg: Witwatersrand University Press.

Mason, R.J. 1968. Transvaal and Natal Iron Age settlement revealed by aerial photography and excavation. African Studies. 27:167-180. Megawatt Journals

Naude, M. 1993. The use of stone on farmsteads on the eastern Transvaal. Africana Society of Pretoria (11): 49-55.

Naude, M. 2000. Vernacular stone buildings and structures on farmsteads in the southern districts of the Mpumalanga Province. South African Journal of Cultural History. 14(2): 31-64

National Archives TAB 496907211, TAB NAB C1122, TAB 496866096

National Environmental Management Act 107 of 1998

National Heritage Resources Act NHRA of 1999 (Act 25 of 1999)

Nkangala District Municipality 2004. Formalization of Cultural and Historical sites. Pretoria: BKS (Pty) Ltd and Cultmatrix cc.

Parkington, J, Morris, D, & Rusch, N. 2008. Karoo Rock Engravings: Follow the San. Cape Town: Creda Communications.

Praagh, L.V. (ed.) 1906. The Transvaal and its mines. London: Praagh & Lloyd

Pelser, A., Van Schalkwyk, J.A., Teichert, F. & Masiteng, I. 2007. The archaeological investigation of an Iron Age site on the farm Rietfontein 101IS, eMalahleni district, Mpumalanga Province. NCHM Research Journal 2:1-24.

Pelser, A.J. 2010. A report on the archaeological investigation of graves on the farm Nooitgedacht 300 JS, impacted on by the Landau colliery mining 11 operations, near Witbank (eMalahleni), Mpumalanga Province. Unpublished Report Archaetnos AE1079. For Anglo-Coal (Landau Colliery).

Pistorius, J.C.C. 2002. A Heritage Impact Assessment (HIA) study for a new power line on the farm Rietvallei 397JS between Middelburg and Arnot in the Mpumalanga Province of South Africa. Unpublished report done for Eskom, Menlyn.

Pistorius, J.C.C. 2003. A Heritage Impact Assessment study for the proposed 22kV Duvha Colliery power line deviation near Middelburg in the Mpumalanga Province of South Africa. Unpublished report done for Eskom, Menlyn.

Pistorius J.C.C. 2004. A Heritage Impact Assessment (HIA) study for the EMP Amendment for Douglas Colliery in the Mpumalanga Province of South Africa. Unpublished report for Pulles, Howard and De Lange.

Pistorius, J.C.C. 2004. A Heritage Impact Assessment (HIA) study for the proposed new Optimum Colliery on the farm Schoonoord 164IS in the Mpumalanga Province of South Africa. Unpublished report done for African EPA.

Pistorius, J.C.C. 2004. A heritage impact assessment (HIA) study for the proposed new Goedgevonden expansion project on the farms Goedgevonden 10IS, Zaaiwater 11IS and Kleinzuikerboschkraal 8IS in the eastern Transvaal highveld in the Mpumalanga Province of South Africa. Pretoria: Unpublished report.

Pistorius, J.C.C. 2005. A Phase I Heritage Impact Assessment (HIA) study for a dual underground and open cast mine on the farm Middelkraal 50IS in the Mpumalanga Province of South Africa. Unpublished report done for African EPA.

Pistorius, J.C.C. 2005. A Phase I Heritage Impact Assessment (HIA) study for Portion 10 of the farm Wonderfontein 428JS and the remainder of Kaalplaats 453JS for the proposed new Steelcoal Open Cast Mine in the Mpumalanga Province of South Africa. Unpublished report done for African EPA.35

Pistorius, J.C.C. 2005. A Phase I Heritage Impact Assessment (HIA) study for the proposed new Brakfontein Open cast and underground mine on the farm Brakfontein 264IR in the Mpumalanga Province of South Africa. Unpublished report for EPA Africa.

Pistorius, J.C.C. 2005. Results of a Phase II Heritage Impact Assessment Study: An investigation of a historical sandstone farmstead and outbuildings on the banks of the Olifants River on the farm Kleynkopje 15IS within the boundaries of Douglas Colliery in the Mpumalanga Province of South Africa.

Pistorius, J.C.C. 2006. A scoping report for a Phase I Heritage Impact Assessment study for the proposed new eMalahleni Water Reclamation Project near Witbank in the Mpumalanga Province of South Africa. Unpublished report for Anglo Coal and Ingwe Colliers.

Pistorius, J.C.C. 2006. A Phase I Heritage Impact Assessment study for Portion 22 of the farm Naauwpoort 477JS in eMalahleni in the Mpumalanga Province of South Africa. Unpublished report prepared for Clean Stream Environmental Services. 42

Pistorius, J.C.C. 2006. A Phase I Heritage Impact Assessment (HIA) study for the proposed new eMalahleni Water Reclamation Project near Witbank in the Mpumalanga Province of South Africa. Unpublished report for Anglo Coal and Ingwe Colliers.

Pistorius, J.C.C. 2007. A Phase I Heritage Impact Assessment (HIA) study for the proposed deviation of a tributary of the Riet River in the Matla Colliery mining area on the Eastern Highveld in the Mpumalanga Province of South Africa. Unpublished report for Golder.

Pistorius, J.C.C. 2008. A Phase I Heritage Impact Assessment (HIA) study for the proposed new Calcine waste disposal facility at Vanchem near eMalahleni (Witbank) in the Mpumalanga Province of South Africa. Unpublished report for Golder.

Pistorius, J.C.C. 2010. A Phase I Heritage Impact Assessment (HIA) Study for the proposed Landau Expansion Project Near eMalahleni (Witbank) in the Mpumalanga Province of South Africa. Unpublished report prepared for Clean Stream Environmental Services.

Pistorius, J.C.C. 2011. A Phase I Heritage Impact Assessment (HIA) Study for the proposed new Schoongezicht Coal Mine near eMalahleni (Witbank) in the Mpumalanga Province of South Africa. Unpublished report prepared for CleanStream Environmental Services.

Pistorius, J.C.C. 2013. A Phase I Heritage Impact Assessment (HIA) Study for the proposed construction of a clean water pipeline from Middleburg Water reclamation plant to the Middleburg, Mpumalanga Province.

Pistorius, J.C.C. 2013. A Phase I Heritage Impact Assessment (HIA) Study for the proposed Landau Colliery Life Extension Project near eMalahleni (Witbank) on the Eastern Highveld in the Mpumalanga Province. Unpublished report prepared for Clean Stream Environmental Services.

Pistorius, J.C.C. 2014. A Phase I Heritage Impact Assessment (HIA) Study for the proposed Landau Colliery navigation section Umlazi South Block Extension Project near eMalahleni (Witbank) on the Eastern Highveld in the Mpumalanga Province. Unpublished report prepared for Clean Stream Environmental Services

Pistorius, J.C.C. 2015. A Phase I Heritage Impact Assessment (HIA) Study for the proposed South 32 SA Coal Holdings (Pty) Ltd 's South 32 CSA proposed extension of open cast operations and associated closure of a section of the D253 Provincial Road at Klipfontein Section of the Middleburg mine on the Eastern Highveld in Mpumalanga

Pretorius, Fransjohan. 1999. Life on commando during the Anglo Boer War 1899-1902. Human & Rousseau: Cape Town.

Republic of South Africa. 1980. Ordinance on Excavations (Ordinance no. 12 of 1980). The Government Printer: Pretoria.

Republic of South Africa. 1983. Human Tissue Act (Act 65 of 1983). The Government Printer: Pretoria.

Republic of South Africa. 1998. National Environmental Management Act (no 107 of 1998). Pretoria: The Government Printer.

Tobias Coetzee and Leane George. 2013. Phase 1 Archaeological Impact Report: for Yoctolux (Pty) Ltd open cast coal mine on Portion 38 of the farm Elandsburg 291 JS, Middleburg, Mpumalanga Province

Roodt, F. 2008. Phase 1 Heritage Impact Scoping Report: Petroline Liquid Fuel Storage Depot Kendal: Mpumalanga. Polokwane: R & R Cultural Resource Consultants.

Ross, R. 2002. A concise history of South Africa. Cambridge: Cambridge University Press.

Taylor, M.O.V. 1979. Wildebeestfontein: a Late Iron Age site in the southeastern Transvaal. In Van der Merwe, N.J. & Huffman, T.N. (eds.) 1979. Iron Age studies in Southern Africa.

Van Schalkwyk, J.A. 2002a. A survey of cultural resources in the proposed Klipspruit mining area, Witbank district, Mpumalanga. Unpublished report 2002KH07. Pretoria: National Cultural History Museum.

Van Schalkwyk, J.A. 2002b. A survey of cultural resources for the Zondagsfontein mining development, Witbank district, Mpumalanga Province. Unpublished report 2002KH28. Pretoria: National Cultural History Museum.

Van Schalkwyk, J.A. 2004a. Heritage impact assessment for the Smithfield mining development, Witbank district, Mpumalanga. Unpublished report 2004KH34. Pretoria: National Cultural History Museum. Heritage Impact Assessment Vlakfontein Mine

Van Schalkwyk, J.A. 2004b. Heritage impact assessment for the Weltevreden, New Largo Underground and New Largo Pit 4 mining developments, Witbank district, Mpumalanga. Unpublished report 2004KH34. Pretoria: National Cultural History Museum.

Van Schalkwyk, J.A. 2006a. Heritage impact assessment for the proposed new power station, Witbank Area. Unpublished report 2006KH111. Pretoria: National Cultural History Museum.

Van Schalkwyk, J.A. 2006b. Heritage impact scoping assessment for the proposed New Largo mining development, Witbank area, Mpumalanga. Unpublished report 2006KH116. Pretoria: National Cultural History Museum.

Van Vollenhoven, A.C. & Pelsler, A.J. 2009. A report on a cultural heritage impact assessment on a portion of portion 27 of the farm Middelburg Town and Townlands 287 JS in Middelburg, Mpumalanga Province. (Unpublished report, Wonderboompoort, Archaetnos).

Van Vollenhoven, A.C. & Pelsler, A.J. 2011. A report on a cultural heritage impact assessment for the proposed Middelburg Eastern Bypass Route, Middelburg, Mpumalanga Province. (Unpublished report, Groenkloof, Archaetnos).

Van Vollenhoven AC 2013. A report on a cultural Heritage Impact Assessment for the proposed open cast mining operation at Elandspruit Portion 31, close to Middleburg, Mpumalanga Province. Archaetnos.

Van Vollenhoven AC and Collins 2014. A report on a cultural Heritage Impact Assessment for the proposed development at Transalloys on Portion 34 and 35 of the farm Elandfontein 309 JS and Portion 20 and 24 of the farm Schoongezicht 308 JS close to eMalahleni, Mpumalanga Province. Archaetnos.

Van Vollenhoven A C and Collins 2015. A report on an Archaeological and built Environment Heritage Impact Assessment for the proposed development chicken houses on the Farm Kopermyn 435 JS and Kwaggafontein 460 JC close to Middleburg in Mpumalanga Province. Archaetnos.

Van Warmelo, N.J., 1935. A Preliminary Survey of the Bantu Tribes of South Africa, Pretoria.

Van Warmelo, N.J., 1937. Grouping and Ethnic History, in Schapera, I., The Bantu-Speaking Tribes of South Africa: An Ethnographical Survey, London.

Van Wyk, Rowe. 2011. Phase 1 Archaeological/ Heritage Impact Assessment for proposed Shanduka Coal rerouting of 2x88kv Traction lines, Middleburg in Mpumalanga Province.

Van Wyk, Rowe. 2012. Revised specialist Report Phase 1 Archaeological/ Heritage Impact Assessment for proposed revised route alignment: 132kv powerlines from Doornpoort to Rockdale in Mpumalanga Province.

Van Wyk, Rowe. 2013. Phase 1 Archaeological/ Heritage Impact Assessment for proposed township establishment on portion 27 of the farm Middleburg Town and Townlands 287 JS Middleburg, Mpumalanga Province.

Voight, E. 1981. Guide to the Archaeological sites in the Northern and Eastern Transvaal. Transvaal Museum.

Wadley, L & Turner, G. 1987. Hope Hill shelter: a Later Stone Age site in southern Transvaal. South African Journal of Science 83(3):98-105.

Whitelaw, G. 1996. Lydenburg revisited. Another look at the Mpumalanga Early Iron Age sequence. South African Archaeological Bulletin. 51

APPENDIX 1: CHANCE FIND PROCEDURE FOR THE LIQUEFIED PETROLEUM GAS (LPG) STORAGE FACILITY ON ERF 79 MARELDEN EXTENSION 5 TOWNSHIP WITHIN EMALAHLENI LOCAL MUNICIPALITY, MPUMALANGA PROVINCE.

May 2022

ACRONYMS

BGG	Burial Grounds and Graves
CFPs	Chance Find Procedures
ECO	Environmental Control Officer
HIA	Heritage Impact Assessment
ICOMOS	International Council on Monuments and Sites
NHRA	National Heritage Resources Act (Act No. 25 of 1999)
SAHRA	South African Heritage Resources Authority
SAPS	South African Police Service
UNESCO	United Nations Educational, Scientific and Cultural Organisation

CHANCE FIND PROCEDURE

Introduction

An Archaeological Chance Find Procedure (CFP) is a tool for the protection of previously unidentified cultural heritage resources during construction. The main purpose of a CFP is to raise awareness of all mine workers and management on site regarding the potential for accidental discovery of cultural heritage resources and establish a procedure for the protection of these resources. Chance Finds are defined as potential cultural heritage (or paleontological) objects, features, or sites that are identified outside of or after Heritage Impact studies, normally as a result of construction or mining monitoring. Chance Finds may be made by any member of the project team who may not necessarily be an archaeologist or even visitors. Appropriate application of a CFP on development projects has led to discovery of cultural heritage resources that were not identified during archaeological and heritage impact assessments. As such, it is considered to be a valuable instrument when properly implemented. For the CFP to be effective, the site manager must ensure that all personnel on the proposed storage facility development site understand the CFP and the importance of adhering to it if cultural heritage resources are encountered. In addition, training or induction on cultural heritage resources that might potentially be found on site should be provided. In short, the Chance find procedure details the necessary steps to be taken if any culturally significant artefacts are found during construction.

Definitions

In short, the term 'heritage resource' includes structures, archaeology, meteors, and public monuments as defined in the South African National Heritage Resources Act (Act No. 25 of 1999) (NHRA) Sections 34, 35, and 37. Procedures specific to burial grounds and graves (BGG) as defined under NHRA Section 36 will be discussed separately as this require the implementation of separate criteria for CFPs.

Background

The proposed Liquefied Petroleum Gas (LPG) storage facility development is located in Witbank, Mpumalanga Province. The proposed Liquefied Petroleum Gas (LPG) storage facility development site is subject to heritage survey and assessment at planning stage in accordance with the NHRA. These surveys are based on surface indications alone and it is therefore possible that sites or significant archaeological remains can be missed during surveys because they occur beneath the surface. These are often accidentally exposed in the course of construction or any associated construction work and hence the need for a Chance Find Procedure to deal with accidental finds. In this case an extensive Archaeological Impact Assessment was completed by Miilo (2022) on the proposed Liquefied Petroleum Gas (LPG) storage facility. The AIA/HIA conducted was very comprehensive covering the

entire site. The current study (Mlilo 2022) did not record any Archaeological material within the proposed development site.

Purpose

The purpose of this Chance Find Procedure is to ensure the protection of previously unrecorded heritage resources along the proposed project site. This Chance Find Procedure intends to provide the applicant and contractors with appropriate response in accordance with the NHRA and international best practice. The aim of this CFP is to avoid or reduce project risks that may occur as a result of accidental finds whilst considering international best practice. In addition, this document seeks to address the probability of archaeological remains finds and features becoming accidentally exposed during construction and movement of construction equipment. Construction of the proposed Liquefied Petroleum Gas (LPG) storage facility activities have the potential to cause severe impacts on significant tangible and intangible cultural heritage resources buried beneath the surface or concealed by tall grass cover. Integrated Specialist Services developed this Chance Find Procedure to define the process which govern the management of Chance Finds during construction. This ensures that appropriate treatment of chance finds while also minimizing disruption of the construction schedule. It also enables compliance with the NHRA and all relevant regulations. Archaeological Chance Find Procedures are to promote preservation of archaeological remains while minimizing disruption of construction scheduling. It is recommended that due to the low to moderate archaeological potential of the project area, all site personnel and contractors be informed of the Archaeological Chance Find procedure and have access to a copy while on site. This document has been prepared to define the avoidance, minimization and mitigation measures necessary to ensure that negative impacts to known and unknown archaeological remains as a result of project activities and are prevented or where this is not possible, reduced to as low as reasonably practical during construction.

Thus, this Chance Finds Procedure covers the actions to be taken from the discovering of a heritage site or item to its investigation and assessment by a professional archaeologist or other appropriately qualified person to its rescue or salvage.

CHANCE FIND PROCEDURE

General

The following procedure is to be executed in the event that archaeological material is discovered:

- All construction/clearance activities in the vicinity of the accidental find/feature/site must cease immediately to avoid further damage to the find site.

- Briefly note the type of archaeological materials you think you have encountered, and their location, including, if possible, the depth below surface of the find
- Report your discovery to your supervisor or if they are unavailable, report to the project ECO who will provide further instructions.
- If the supervisor is not available, notify the Environmental Control Officer immediately. The Environmental Control Officer will then report the find to the Site Manager who will promptly notify the project archaeologist and SAHRA.
- Delineate the discovered find/ feature/ site and provide 30m buffer zone from all sides of the find.
- Record the find GPS location, if able.
- All remains are to be stabilised *in situ*.
- Secure the area to prevent any damage or loss of removable objects.
- Photograph the exposed materials, preferably with a scale (a yellow plastic field binder will suffice).
- The project archaeologist will undertake the inspection process in accordance with all project health and safety protocols under direction of the Health and Safety Officer.

- **Finds rescue strategy:** All investigation of archaeological soils will be undertaken by hand, all finds, remains and samples will be kept and submitted to a museum as required by the heritage legislation. In the event that any artefacts need to be conserved, the relevant permit will be sought from the SAHRA.
- An on-site office and finds storage area will be provided, allowing storage of any artefacts or other archaeological material recovered during the monitoring process.
- In the case of human remains, in addition to the above, the SAHRA Burial Ground Unit will be contacted and the guidelines for the treatment of human remains will be adhered to. If skeletal remains are identified, an archaeological will be available to examine the remains.
- The project archaeologist will complete a report on the findings as part of the permit application process.
- Once authorisation has been given by SAHRA, the Applicant will be informed when construction activities can resume.

Management of chance finds

Should the Heritage specialist conclude that the find is a heritage resource protected in terms of the NRHA (1999) Sections 34, 36, 37 and NHRA (1999) Regulations (Regulation 38, 39, 40), ISS will notify SAHRA and/or PHRA on behalf of the applicant. SAHRA/PHRA may require that a search and rescue exercise be conducted in terms of NHRA Section 38, this may include rescue excavations, for which Integrated Specialist Services (Pty) Ltd will submit a rescue permit application having fulfilled all requirements of the permit application process.

In the event that human remains are accidentally exposed, SAHRA Burial Ground Unit or ISS Heritage Specialist must immediately be notified of the discovery in order to take the required further steps:

- a. Heritage Specialist to inspect, evaluate and document the exposed burial or skeletal remains and determine further action in consultation with the SAPS and Traditional authorities:
- b. Heritage specialist will investigate the age of the accidental exposure in order to determine whether the find is a burial older than 60 years under the jurisdiction of SAHRA or that the exposed burial is younger than 60 years under the jurisdiction of the Department of Health in terms of the Human Tissue Act.
- c. The local SAPS will be notified to inspect the accidental exposure in order to determine where the site is a scene of crime or not.
- d. Having inspected and evaluated the accidental exposure of human remains, the project Archaeologist will then track and consult the potential descendants or custodians of the affected burial.
- e. The project archaeologist will consult with the traditional authorities, local municipality, and SAPS to seek endorsement for the rescue of the remains. Consultation must be done in terms of NHRA (1999) Regulations 39, 40, 42.
- f. Having obtained consent from affected families and stakeholders, the project archaeologist will then compile a Rescue Permit application and submit to SAHRA Burial Ground and Graves Unit.
- g. As soon as the project archaeologist receives the rescue permit from SAHRA he will in collaboration with the company/contractor arrange for the relocation in terms of logistics and appointing of an experienced undertaker to conduct the relocation process.
- h. The rescue process will be done under the supervision of the archaeologist, the site representative and affected family members. Retrieval of the remains shall be undertaken in such a manner as to reveal the stratigraphic and spatial relationship of the human skeletal remains with other archaeological features in the excavation (e.g., grave goods, hearths, burial pits, etc.). A catalogue and bagging system shall be utilised that will allow ready reassembly and relational analysis of all elements in a laboratory. The remains will not be touched with the naked hand; all Contractor personnel working on the excavation must wear clean cotton or non-powdered latex gloves when handling remains in order to minimise contamination of the remains with modern human DNA. The project archaeologist will document the process from exhumation to reburial.

- i. Having fulfilled the requirements of the rescue/burial permit, the project archaeologist will compile a mitigation report which details the whole process from discovery to relocation. The report will be submitted to SAHRA and to the company.

Note that the relocation process will be informed by SAHRA Regulations and the wishes of the descendants of the affected burial.

Appendix 2: Heritage Management Plan Input into the proposed Liquefied Petroleum Gas (LPG) storage facility application EMPr

Objective	<ul style="list-style-type: none"> • Protection of archaeological sites and land considered to be of cultural value; • Protection of known physical cultural property sites against vandalism, destruction and theft; and • The preservation and appropriate management of new archaeological finds should these be discovered during mining. • Protection of Burial Grounds and Graves 							
No.	Activity	Mitigation Measures	Duration	Frequency	Responsibility	Accountable	Contacted	Informed
Pre-Construction Phase								
1	Planning	Ensure all known sites of cultural, archaeological, and historical significance are demarcated on the site layout plan and marked as no-go areas.	Throughout Project	Weekly Inspection	Contractor [C] CECO	SM	ECO	EA EM PM
Mining Phase								
1	Emergency Response	Should any archaeological or physical cultural property heritage resources be exposed during excavation for the purpose of mining, mining in the vicinity of the finding must be stopped until heritage authority has cleared the development to continue.	N/A	Throughout	C CECO	SM	ECO	EA EM PM
		Should any archaeological, cultural property heritage resources be exposed during excavation or be found on development site, a registered heritage specialist or MPHRA official must be called to site for inspection.		Throughout	C CECO	SM	ECO	EA EM PM
		Under no circumstances may any archaeological, historical or any physical cultural property heritage material be destroyed or removed from site;		Throughout	C CECO	SM	ECO	EA EM PM
		Should remains and/or artefacts be discovered on the development site during earthworks, all work will cease in the area affected and the Contractor will immediately inform the Mining Manager who in turn will inform SAHRA/MPHRA.		When necessary	C CECO	SM	ECO	EA EM PM
		Should any remains be found on site that is potentially human remains, the PHRA and South African Police Service should be contacted.		When necessary	C CECO	SM	ECO	EA EM PM
Rehabilitation Phase								
		Same as construction phase.						
Operational Phase								
		Same as construction phase.						

Appendix 3: Legal background in South Africa

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

General principles for heritage resources management

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

- (a) Heritage resources have lasting value in their own right and provide evidence of the origins of South African society and as they are valuable, finite, non-renewable and irreplaceable they must be carefully managed to ensure their survival;
- (b) every generation has a moral responsibility to act as trustee of the national heritage for succeeding generations and the State has an obligation to manage heritage resources in the interests of all South Africans;
- (c) heritage resources have the capacity to promote reconciliation, understanding and respect, and contribute to the development of a unifying South African identity; and
- (d) heritage resources management must guard against the use of heritage for sectarian purposes or political gain.

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

- (a) the skills and capacities of persons and communities involved in heritage resources management must be developed; and
- (b) provision must be made for the ongoing education and training of existing and new heritage resources management workers.

(3) Laws, procedures and administrative practices must—

- (a) be clear and generally available to those affected thereby;
- (b) in addition to serving as regulatory measures, also provide guidance and information to those affected thereby; and
- (c) give further content to the fundamental rights set out in the Constitution.

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

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

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

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

- (a) take account of all relevant cultural values and indigenous knowledge systems;
- (b) take account of material or cultural heritage value and involve the least possible alteration or loss of it;
- (c) promote the use and enjoyment of and access to heritage resources, in a way consistent with their cultural significance and conservation needs;
- (d) contribute to social and economic development;
- (e) safeguard the options of present and future generations; and
- (f) be fully researched, documented and recorded.

Burial grounds and graves

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

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

- (3) (a) No person may, without a permit issued by SAHRA or a provincial heritage resources authority—
- (a) destroy, damage, alter, exhume or remove from its original position or otherwise disturb the grave of a victim of conflict, or any burial ground or part thereof which contains such graves;
 - (b) destroy, damage, alter, exhume, remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority; or
 - (c) bring onto or use at a burial ground or grave referred to in paragraph (a) or (b) any excavation equipment, or any equipment which assists in the detection or recovery of metals.
- (4) SAHRA or a provincial heritage resources authority may not issue a permit for the destruction or damage of any burial ground or grave referred to in subsection (3)(a) unless it is satisfied that the applicant has made satisfactory arrangements for the exhumation and re-interment of the contents of such graves, at the cost of the applicant and in accordance with any regulations made by the responsible heritage resources authority.
- (5) SAHRA or a provincial heritage resources authority may not issue a permit for any activity under subsection (3)(b) unless it is satisfied that the applicant has, in accordance with regulations made by the responsible heritage resources authority—
- (a) made a concerted effort to contact and consult communities and individuals who by tradition have an interest in such grave or burial ground; and
 - (b) reached agreements with such communities and individuals regarding the future of such grave or burial ground.
- (6) Subject to the provision of any other law, any person who in the course of development or any other activity discovers the location of a grave, the existence of which was previously unknown, must immediately cease such activity and report the discovery to the responsible heritage resources authority which must, in co-operation with the South African Police Service and in accordance with regulations of the responsible heritage resources authority—
- (a) carry out an investigation for the purpose of obtaining information on whether or not such grave is protected in terms of this Act or is of significance to any community; and
 - (b) if such grave is protected or is of significance, assist any person who or community which is a direct descendant to make arrangements for the exhumation and re-interment of the contents of such grave or, in the absence of such person or community, make any such arrangements as it deems fit.
- (7) (a) SAHRA must, over a period of five years from the commencement of this Act, submit to the Minister for his or her approval lists of graves and burial grounds of persons connected with the liberation struggle and who died in exile or as a result of the action of State security forces or agents provocateur and which, after a process of public consultation, it believes should be included among those protected under this section.
- (b) The Minister must publish such lists as he or she approves in the Gazette.
- (8) Subject to section 56(2), SAHRA has the power, with respect to the graves of victims of conflict outside the Republic, to perform any function of a provincial heritage resources authority in terms of this section.
- (9) SAHRA must assist other State Departments in identifying graves in a foreign country of victims of conflict connected with the liberation struggle and, following negotiations with the next of kin, or relevant authorities, it may re-inter the remains of that person in a prominent place in the capital of the Republic.

General policy

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

- (a) must, within three years after the commencement of this Act, adopt statements of general policy for the management of all heritage resources owned or controlled by it or vested in it; and
 - (b) may from time to time amend such statements so that they are adapted to changing circumstances or in accordance with increased knowledge; and
 - (c) must review any such statement within 10 years after its adoption.
- (2) Each heritage resources authority must adopt for any place which is protected in terms of this Act and is owned or controlled by it or vested in it, a plan for the management of such place in accordance with the best environmental, heritage conservation, scientific and educational principles that can reasonably be applied taking into account the location, size and nature of the place and the resources of the authority concerned, and may from time to time review any such plan.
- (3) A conservation management plan may at the discretion of the heritage resources authority concerned and for a period not exceeding 10 years, be operated either solely by the heritage resources authority or in conjunction with an environmental or tourism authority or under contractual arrangements, on such terms and conditions as the heritage resources authority may determine.
- (4) Regulations by the heritage resources authority concerned must provide for a process whereby, prior to the adoption or amendment of any statement of general policy or any conservation management plan, the public and interested organisations are notified of the availability of a draft statement or plan for inspection, and comment is invited and considered by the heritage resources authority concerned.
- (5) A heritage resources authority may not act in any manner inconsistent with any statement of general policy or conservation management plan.
- (6) All current statements of general policy and conservation management plans adopted by a heritage resources authority must be available for public inspection on request.