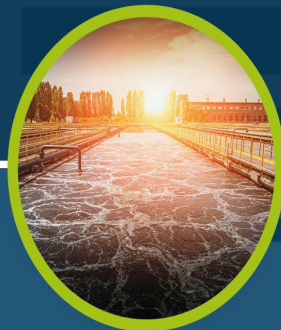


Appendix G7: Heritage





forestry, fisheries & the environment

Department:
Forestry, Fisheries and the Environment
REPUBLIC OF SOUTH AFRICA

Private Bag X447, Pretoria, 0001, Environment House, 473 Steve Biko Road, Pretoria, 0002 Tel: +27 12 399 9000, Fax: +27 86 625 1042

SPECIALIST DECLARATION FORM – AUGUST 2023

Specialist Declaration form for assessments undertaken for application for authorisation in terms of the National Environmental Management Act, Act No. 107 of 1998, as amended and the Environmental Impact Assessment (EIA) Regulations, 2014, as amended (the Regulations)

REPORT TITLE

Proposed Sedibeng Mallings Plant in the Sedibeng District Municipality of the Gauteng Province.

Kindly note the following:

1. This form must always be used for assessment that are in support of applications that must be subjected to Basic Assessment or Scoping & Environmental Impact Reporting, where this Department is the Competent Authority.
2. This form is current as of August 2023. It is the responsibility of the Applicant / Environmental Assessment Practitioner (EAP) to ascertain whether subsequent versions of the form have been published or produced by the Competent Authority. The latest available Departmental templates are available at <https://www.dffe.gov.za/documents/forms>.
3. An electronic copy of the signed declaration form must be appended to all Draft and Final Reports submitted to the department for consideration.
4. The specialist must be aware of and comply with 'the Procedures for the assessment and minimum criteria for reporting on identified environmental themes in terms of sections 24(5)(a) and (h) and 44 of the act, when applying for environmental authorisation - GN 320/2020', where applicable.

1. SPECIALIST INFORMATION

Title of Specialist Assessment	Heritage Assessment
Specialist Company Name	PGS Heritage (Pty) Ltd
Specialist Name	Daniel Tasker
Specialist Identity Number	[REDACTED]
Specialist Qualifications:	MSc Archaeology
Professional affiliation/registration:	[REDACTED]
Physical address:	906 Bergarend Street, Waverly, Pretoria
Postal address:	PO Box 32542
Postal address	Totiusdal, 0134
Telephone	[REDACTED]
Cell phone	[REDACTED]
E-mail	[REDACTED]

SPECIALIST DECLARATION FORM – AUGUST 2023

2. DECLARATION BY THE SPECIALIST

I, Daniel Tasker declare that –

- I act as the independent specialist in this application;
- I am aware of the procedures and requirements for the assessment and minimum criteria for reporting on identified environmental themes in terms of sections 24(5)(a) and (h) and 44 of the National Environmental Management Act (NEMA), 1998, as amended, when applying for environmental authorisation which were promulgated in Government Notice No. 320 of 20 March 2020 (i.e. "the Protocols") and in Government Notice No. 1150 of 30 October 2020.
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, Regulations and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, Regulations and all other applicable legislation;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing –
 - any decision to be taken with respect to the application by the competent authority; and;
 - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- All the particulars furnished by me in this form are true and correct; and
- I realise that a false declaration is an offence in terms of Regulation 48 and is punishable in terms of section 24F of the NEMA Act.



Signature of the Specialist

PGS Heritage (Pty) Ltd

Name of Company:

14 Jul 2024

Date

<p>Ek sertifiseer die bostaande verklaring deur my afgetekende en dat die verklaarder erken dat hy sy vertooud is met die inhoud van hierdie verklaring en dat, byvoorbeeld, hierdie verklaring is teen my persoonlike belangstelling en verklaarder se handtekening met duimafdruk is in my teenwoordigheid daarop aangebring.</p>	<p>I certify that the above statement was taken by me and that the declarant has acknowledged that he/she knows and understands the content of this statement. This statement was sworn to/affirmed before me and declarant's signature/mark/thumbprint was placed thereon in my presence.</p>
<p>te: <u>DOUGLASDALE</u> op: <u>2024/7/14</u> om: <u>14:40</u></p>	
<p></p>	
<p>(handtekening) Kommissaris van Ede / (Signature) Commissioner of Oaths</p>	
<p><u>MANTAPO MABUC</u></p>	
<p>Volle Voornamie en Van in Drukke / Full First names and Surname in Block letters</p>	
<p><u>TOPAZ AVG</u></p>	
<p>Besigheidadres (Straatadres) / Business Address (Street Address)</p>	
<p><u>DOUGLASDALE</u></p>	
<p><u>SST</u></p>	
<p>Rang/Rank</p>	
	<p>SA POLISIEDIENS SA POLICE SERVICES</p>



3. UNDERTAKING UNDER OATH/ AFFIRMATION

I, Daniel Tasker, swear under oath / affirm that all the information submitted or to be submitted for the purposes of this application is true and correct.

[Redacted Signature]

Signature of the Specialist

PGS Heritage (Pty) Ltd

Name of Company

14 July 2024

Date [Redacted Signature]

Signature of the Commissioner of Oaths

14 Jul 2024

Date





1

PGS HERITAGE

Proposed Sedibeng Maltings Plant in the Sedibeng District Municipality of the Gauteng Province.

Heritage Impact Assessment

Template Number	Document Number	Revision	Date
PGS PJ REP 007 01	803HIA-001	1.0	11 June 2024



+ 27 (0) 12 332 5305



+27 (0) 86 675 8077



contact@pgsheritage.co.za



PO Box 32542, Totiusdal, 0134

Offices in South Africa, Kingdom of Lesotho and Mozambique

Head Office:
906 Bergarend Streets
Waverley, Pretoria,
South Africa

Directors: HS Steyn, PD Birkholtz, W Fourie

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page ii

REVISION HISTORY

Version	Issue Date	Description of Changes
00	11 June 2024	First draft

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page iii

Declaration of Independence

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

Disclosure of Vested Interest

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

HERITAGE CONSULTANT:

PGS Heritage (Pty) Ltd

CONTACT PERSON:

Daniel Tasker – Archaeologist



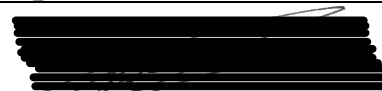

Tel: +27 (0) 12 332 5305

Email: daniel@pgsheritage.co.za

SIGNATURE:

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page iv

ACKNOWLEDGEMENT OF RECEIPT

Report Title			
Control	Name	Signature	Designation
Author	D Tasker		PGS Heritage - Archaeologist
Reviewer	J Angel		PGS Heritage Senior Archaeologist
Reviewer	W Fourie		PGS Heritage -Project Manager/Archaeologist
Reviewed	P Reddy		Client

CLIENT: Royal Haskoning DHV (Pty) Ltd

CONTACT PERSON: Prashika Reddy
Tel: 087 352 1577

SIGNATURE: _____

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page v

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

Requirements of Appendix 6 – GN R326 EIA Regulations of 7 April 2017	Relevant section in report
1.(1) (a) (i) Details of the specialist who prepared the report	Page ii of Report – Contact details and company
(ii) The expertise of that person to compile a specialist report including a curriculum vita	Section 1.2 – refer to Appendix C
(b) A declaration that the person is independent in a form as may be specified by the competent authority	Page ii of the report
(c) An indication of the scope of, and the purpose for which, the report was prepared	Section 1.1
(cA) An indication of the quality and age of base data used for the specialist report	N/A
(cB) a description of existing impacts on the site, cumulative impacts of the proposed development and levels of acceptable change;	Section 5
(d) The duration, date and season of the site investigation and the relevance of the season to the outcome of the assessment	Section 4.4
(e) a description of the methodology adopted in preparing the report or carrying out the specialised process inclusive of equipment and modelling used	Appendix A and B
(f) details of an assessment of the specific identified sensitivity of the site related to the proposed activity or activities and its associated structures and infrastructure, inclusive of a site plan identifying site alternatives;	Section 4
(g) An identification of any areas to be avoided, including buffers	Section 4
(h) A map superimposing the activity including the associated structures and infrastructure on the environmental sensitivities of the site including areas to be avoided, including buffers;	Section 4.3
(i) A description of any assumptions made and any uncertainties or gaps in knowledge;	Section 1.3
(j) A description of the findings and potential implications of such findings on the impact of the proposed activity, including identified alternatives, on the environment	Section 4
(k) Any mitigation measures for inclusion in the EMPr	Section 6
(l) Any conditions for inclusion in the environmental authorization	Section 6
(m) Any monitoring requirements for inclusion in the EMPr or environmental authorization	Section 6
(n)(i) A reasoned opinion as to whether the proposed activity, activities or portions thereof should be authorised and	Section 6 and 7
(n)(iA) A reasoned opinion regarding the acceptability of the proposed activity or activities; and	
(n)(ii) If the opinion is that the proposed activity, activities or portions thereof should be authorised, any avoidance, management and mitigation measures that should be included in the EMPr, and where applicable, the closure plan	Section 6
(o) A description of any consultation process that was undertaken during the course of carrying out the study	Informal consultation in fieldwork.
(p) A summary and copies if any comments that were received during any consultation process	Not applicable. To date no comments regarding heritage resources that require input from a specialist have been raised.
(q) Any other information requested by the competent authority.	Not applicable.
(2) Where a government notice by the Minister provides for any protocol or minimum information requirement to be applied to a specialist report, the requirements as indicated in such notice will apply.	No protocols or minimum standards for HIAs or PIAs

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page vi

EXECUTIVE SUMMARY

PGS Heritage (Pty) Ltd was appointed by Royal Haskoning DHV (Pty) Ltd to undertake a Heritage Impact Assessment (HIA) that forms part of the Basic Environmental Assessment (BA) for the proposed Soufflet Malt new greenfield malt production facility in the Sedibeng District Municipality of Gauteng, in South Africa.

A further standalone Palaeontological Impact Assessment (PIA) was completed for PGS by Dr Elize Butler of Banzai Environmental.

During the fieldwork a total of two heritage resources were identified. Both the old road (**SM01**) and old pipeline (**SM02**) markers were rated as having a Low heritage grading and are not conservation worthy (NCW) as they contain no cultural or scientific value. See the individual site descriptions as contained in **Appendix C**. The field description forms were collected with ArcGIS Survey123 in field software.

The study area currently intersects the 2km buffer of the Provincial Heritage Site of Klip River Quarry, An Acheulean/Middle Stone Age gravel site. Given the area's rich archaeological history (see **Section 4.2**), the possibility for subsurface finds should not be ignored. Therefore, it is the opinion of PGS Heritage that a Chance Finds Procedure should be followed (see **Section 6.2**)

It should be noted that during the fieldwork, in the aforementioned tilled and worked soils (**Figure 18**) of the malt facility floor plan, a single quartzite lithic artefact (flake see **Figure 17**) was seen. Given its density and displaced nature no scientific value can be immediately attached however given that the lithic was seen in the currently protected Provincial Heritage Sites' buffer, astute attention should be given to the Chance Finds Procedure during the construction phase.

Mitigation considerations and buffers to consider from the EIA phase are:

- No heritage resources were located, however, not detracting in any way from the comprehensiveness of the fieldwork undertaken, it is necessary to realise that the heritage resources located during the fieldwork do not necessarily represent all the possible heritage resources present within the area. Various factors account for this, including the subterranean nature of some archaeological sites and existing vegetation cover. It should be noted most of the study area was accessible for the fieldwork survey, but the vegetation is thick bush and visibility of sites such as Stone Age or Iron Age are difficult to locate.
- During the construction phase, it is important to recognize any significant material being unearthed, making the correct judgment on which actions should be taken. It is recommended that the following chance find procedure should be implemented.

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page vii

- A heritage practitioner / archaeologist should be appointed to develop a heritage induction program and conduct training for the ECO as well as team leaders in the identification of heritage resources and artefacts **during the implementation of the EMPr.**
- An appropriately qualified heritage practitioner / archaeologist must be identified to be called upon in the event that any possible heritage resources or artefacts are identified.
- Should an archaeological site or cultural material be discovered during construction (or operation), the area should be demarcated, and construction activities halted.
- The qualified heritage practitioner / archaeologist will then need to come out to the site and evaluate the extent and importance of the heritage resources and make the necessary recommendations for mitigating the find and the impact on the heritage resource.
- The contractor therefore should have some sort of contingency plan so that operations could move elsewhere temporarily while the materials and data are recovered.

Mitigation measures

Mitigation measures are described in **Table 8** of this report.

Conclusion

It is the combined considered opinion of the heritage specialists that the proposed project will have no direct impact on the identified heritage resources rated being of low heritage significance.

With the implementation of recommended mitigation measures the overall impact on heritage resources will be reduced to acceptable levels during the activities of the project.

PGS Heritage sees no way in which construction, in its whole extent, should be halted from a heritage position.

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page viii

TABLE OF CONTENT

1	INTRODUCTION		1
1.1	Scope of the Study		1
1.2	Specialist Qualifications		1
1.3	Assumptions and Limitations		2
1.4	Legislative Context		2
1.4.1	<i>Notice 320 of the Government Gazette 45421</i>		2
1.4.2	<i>Requirements of Appendix 6 of the NEMA EIA Regulations (as amended)</i>		3
1.4.3	<i>NEMA – Appendix 6 requirements</i>		3
2	TECHNICAL DETAILS OF THE PROJECT		4
2.1	Locality		4
2.1.1	<i>Site Description</i>		4
2.2	Technical Project Description		5
2.2.1	<i>Project description</i>		5
3	ASSESSMENT METHODOLOGY		8
3.1	Methodology for Assessing Heritage Site significance		8
3.1.1	<i>Site Significance</i>		9
3.2	Methodology used in determining the significance of environmental impacts		11
4	CURRENT STATUS QUO		12
4.1	Site Description		12
4.2	Overview of the study area and surrounding landscape		13
4.2.1	<i>Archaeological Background</i>		17
4.2.2	<i>Archival and historical maps</i>		20
4.2.3	<i>Previous heritage impact assessment reports from the study area and surroundings</i>		23
4.2.4	<i>Heritage screening</i>		25
4.2.5	<i>Heritage sensitivity</i>		26
4.3	Fieldwork findings		27
5	IMPACT ASSESSMENT		30
5.1	Details of all alternatives considered		30
5.1.1	<i>Heritage</i>		30
5.2	Impact assessment summary table		30
6	MANAGEMENT RECOMMENDATIONS AND GUIDELINES		31
6.1	Construction and operational phases		31
6.2	Chance finds procedure		31
6.3	Possible finds during construction		32
6.4	Timeframes		32

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page ix

6.5	Heritage Management Plan for EMPr implementation	33
7	CONCLUSIONS AND RECOMMENDATIONS	34
7.1	Mitigation measures	35
7.2	General	35
8	REFERENCES	36
8.1	Published References	36
8.2	Unpublished References	37
8.3	Internet References	38
8.4	Google Earth	38

List of Figures

<i>Figure 1 – Human and Cultural Timeline in Africa</i>	xiv
<i>Figure 2 - Regional Locality of study area</i>	5
<i>Figure 3 – Current Heineken Brewery</i>	12
<i>Figure 4 – Klip Rivier</i>	12
<i>Figure 5 – Midvaal Pump Station</i>	13
<i>Figure 6 – The R59</i>	13
<i>Figure 7 – Carletonville Dolomite Grassland with agricultural activities seen in the background</i>	13
<i>Figure 8 - Satellite imagery depicting the malt production facility superimposed on the clearly tilled soil</i>	13
<i>Figure 9 - Revil Mason and spectators at the Van Riet Louw Archaeological Reserve c. 1965 (Vaal Teknorama- Prins 2007)</i>	14
<i>Figure 10 - The current development state of the Klip River Quarry site. A train station occupies the site.</i>	18
<i>Figure 11 - Historical map 2628AC 1st ed. (1939). Huts can be seen adjacent the study area.</i>	21
<i>Figure 12 - Historical map 2628AC 2nd ed. (1944). Huts are still seen adjacent the study area.</i>	22
<i>Figure 13 - Historical map 2628AC 3rd ed. (1957). Huts have been moved but are still adjacent the study area.</i>	22
<i>Figure 14 - Historical map 2628AC 4th ed. (1979). Huts are no longer visible. The ruins (Murasies) are 90m away from the proposed discharge point.</i>	23
<i>Figure 15 - Screening tool map indicating a high sensitivity rating for archaeology and heritage</i>	26
<i>Figure 16 - Fieldwork tracklogs (track in green)</i>	28
<i>Figure 17 - View of a singular scattered lithic artefact exposed from the tilled soils at the proposed malt facility.</i>	29
<i>Figure 18 - Field clearing of the tilled soil at the proposed malt facility</i>	29
<i>Figure 19 - Old road marker.</i>	3
<i>Figure 20 - The opposite road marker.</i>	3
<i>Figure 21 - Old pipeline marker.</i>	0
<i>Figure 22 - Another view of the pipeline marker.</i>	0
<i>Figure 23 - Concrete found near marker.</i>	0

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page x

List of Tables

Table 1: Reporting Requirements for GN 320..... 3

Table 2: Rating system for archaeological resources 9

Table 3: Rating system for built environment resources..... 10

Table 4: Tangible heritage site in the study area. 26

Table 5: Landform type to heritage find matrix..... 27

Table 6: Impact Table..... 30

Table 7: Lead times for permitting and mobilisation 32

Table 8: Heritage Management Plan for EMPr implementation..... 33

List of Appendices

- A *Environmental Impact Assessment Methodology*
- B *Site description forms*
- C *Project team CV's*

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page xi

TERMINOLOGY AND ABBREVIATIONS

Archaeological resources

This includes:

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

Cultural significance

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

Development

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

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

Early Stone Age

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

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page xii

Fossil

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

Heritage

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

Heritage resources

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

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

Holocene

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

Late Stone Age

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

Late Iron Age (Early Farming Communities)

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

Middle Stone Age

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

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page xiii

Palaeontology

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

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

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page xiv

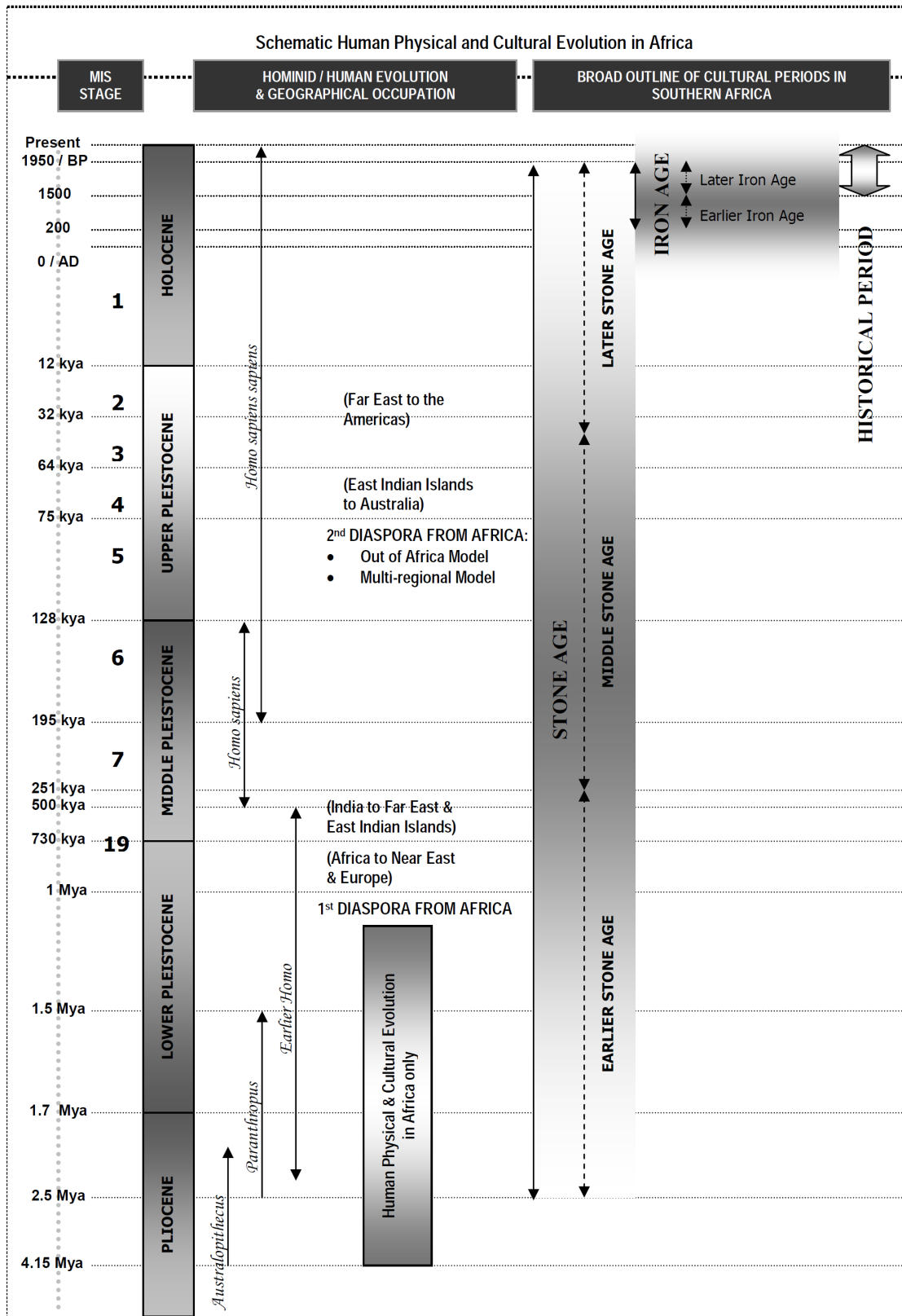


Figure 1 – Human and Cultural Timeline in Africa

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page 1

1 INTRODUCTION

PGS Heritage (Pty) Ltd was appointed by Royal Haskoning DHV (Pty) Ltd to undertake a Heritage Impact Assessment (HIA) that forms part of the Basic Environmental Assessment (BA) for the proposed Soufflet Malt new greenfield malt production facility in the Sedibeng District Municipality of Gauteng, in South Africa.

A further standalone Palaeontological Impact Assessment (PIA) was completed for PGS by Dr Elize Butler of Banzai Environmental.

1.1 Scope of the Study

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

1.2 Specialist Qualifications

This HIA Report was compiled by PGS Heritage (PGS).

The staff at PGS has a combined experience of nearly 70 years in the heritage consulting industry. PGS and its staff have extensive experience in managing HIA processes. PGS will only undertake heritage assessment work where they have the relevant expertise and experience to undertake that work competently.

Daniel Tasker, the author, is a MSc (Archaeology) graduate from the University of the Witwatersrand, South Africa, specialising in the Stone Age. He is a registered Professional Archaeologist with the Association of Southern African Professional Archaeologists (ASAPA).

Wouter Fourie, the Project Coordinator and Archaeologist, is registered with the Association of Southern African Professional Archaeologists (ASAPA) as a Professional Archaeologist and is accredited as a Principal Investigator; he is further an Accredited Professional Heritage Practitioner with the Association of Professional Heritage Practitioners (APHP).

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page 2

1.3 Assumptions and Limitations

Not detracting in any way from the comprehensiveness of the fieldwork undertaken, it is necessary to realise that the heritage resources located during the fieldwork do not necessarily represent all the possible heritage resources present within the area. Various factors account for this, including the subterranean nature of some archaeological sites and existing vegetation cover. It should be noted most of the study area was accessible for the fieldwork survey.

Fieldwork was also focussed on area that was not previously ploughed or disturbed by farming activity, thus focussing on areas with the highest potential to yield heritage resources.

Therefore, should any heritage features and/or objects be located or observed outside the identified heritage sensitive areas during the construction activities, a heritage specialist must be contacted immediately. Such observed or located heritage features and/or objects may not be disturbed or removed in any way until such time that the heritage specialist has been able to make an assessment as to the significance of the site (or material) in question. This applies to graves and cemeteries as well. If any graves or burial places are located during the development, the procedures and requirements pertaining to graves and burials will apply as set out below.

1.4 Legislative Context

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

- Government Notice (GN) 320 of the Government Gazette 45421- Procedures for assessment and minimum criteria for reporting on identified environmental themes when applying for environmental authorisation (20 March 2020);
- The National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA), with specific reference to Appendix 6 of the EIA Regulations (2014, as amended); and
- The National Heritage Resources Act, 1999 (Act No. 25 of 1999) (NHRA).

1.4.1 Notice 320 of the Government Gazette 45421

Although minimum standards for archaeological (2007) and palaeontological (2012) assessments were published by the South African Heritage Resources Agency (SAHRA), GN 320 requires sensitivity verification for a site selected on the national web based environmental screening tool for which no specific assessment protocol related to any theme has been identified. The requirements for this GN are listed in Table 1Error! Reference source not found. and the applicable section in this report noted.

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page 3

Table 1: Reporting Requirements for GN 320

GN 320	Relevant section in report	Where not applicable in this report
1.2 (a) a desktop analysis, using satellite imagery;	Section 4.3	-
1.2 (b) a preliminary on-site inspection to identify if there are any discrepancies with the current use of land and environmental status quo versus the environmental sensitivity as identified on the national web-based environmental screening tool, such as new developments, infrastructure, indigenous/pristine vegetation, etc.	Section 4.1	-
1.3 (a) confirms or disputes the current use of the land and environmental sensitivity as identified by the national web-based environmental screening tool;	Section 4.2.3	-
1.3 (b) contains motivation and evidence (e.g. photographs) of either the verified or different use of the land and environmental sensitivity;	Section 4.1	-

1.4.2 Requirements of Appendix 6 of the NEMA EIA Regulations (as amended)

The HIA process considers the NEMA EIA Regulations (as amended) Appendix 6 requirements for specialist reports, as indicated in the table on **page v** of this report.

1.4.3 NEMA – Appendix 6 requirements

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

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

Section 24(2) of the NEMA requires environmental authorisation from the environmental authority for certain activities that have been identified and must undergo an EIA or Basic Assessment (BA) process. Similarly, Section 38 NHRA lists specific development activities that require notice to the heritage resources authority to determine if an HIA process is necessary. Approval from the heritage authority is mandatory before proceeding with the development activities.

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page 4

To avoid redundancy and facilitate coordination between NEMA and NHRA requirements, Section 38(8) of the NHRA states that if the development activities listed in Section 38(1) require an EIA under NEMA, a separate HIA and approval from the heritage resources authority are unnecessary. However, the environmental authority must ensure that the heritage resources authority's requirements for HIA are fulfilled and that its comments and recommendations are considered before granting environmental authorisation.

Therefore, if a NEMA EIA is required for the development activities listed under Section 38 of the NHRA, separate HIA and EIA processes may not be followed, and different decisions may not be issued under NHRA and NEMA. The EIA process will be followed, and if the heritage resources authority requires HIA, it must be conducted as one of the EIA specialist studies.

The environmental authority must ensure that the heritage resources authority's requirements for the assessment are met. A separate heritage approval may not be issued, but the environmental authority must consider the heritage resources authority's comments and recommendations before granting or refusing environmental authorisation.

It must however be noted that if no environmental process is required, but the proposed development still triggers the requirements for and HIA under section 38(1) of the NHRA, SAHRA or the relevant provincial heritage authority will be the authorising authority. This entity could then require a full HIA completed taking into account the requirements for public participation and stakeholder engagement as contemplate in the regulations under the NHRA.

2 TECHNICAL DETAILS OF THE PROJECT

2.1 Locality

The proposed Soufflet Malt new greenfield malt production facility is located just 3 km to the West of the town of Garthdale AH and the pipeline straddles the R59 provincial road in the Sedibeng District Municipality of Gauteng, in South Africa. (**Figure 2**).

2.1.1 Site Description

The application area is situated to the south of the Heineken Sedibeng Brewery within a greenfield area in the Sedibeng District and Midvaal Local Municipality. The study area is on Erf 244 Graceview and is owned by Heineken with a footprint area of approximately 10ha (**Figure 2**).

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page 5

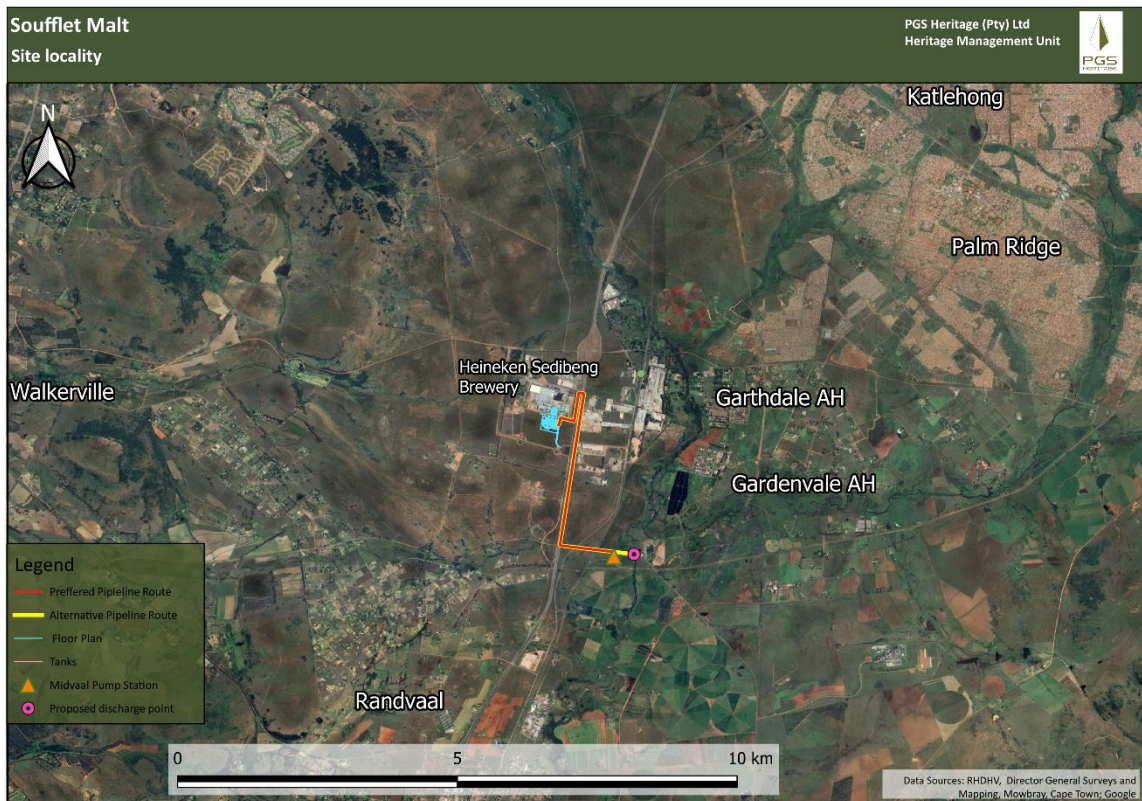


Figure 2 - Regional Locality of study area.

2.2 Technical Project Description

2.2.1 Project description

The following project description is provided by RHDHV:

“Background to the Project

The envisaged project is meant for the establishment of a Malting Plant which is to be located in the Sedibeng District of Gauteng. Malted barley (Malt) is the major raw material used in brewing of most beers. Of the total malt production, approximately 90 % is produced from barley. About 94 % of malt is used for making beer. The beer sector in South Africa contributes to roughly 1 in every 66 jobs in the country, with the supply chain comprising farmers, packaging manufacturers, brewers, distributors, and retailers.

Project Location

The Soufflet Malting Facility is to be established at Graceview Industrial Park in Sedibeng which is located in the southern part of Gauteng. The site has been zoned as an industrial development

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page 6

area and the outline scheme reports has been handed over to the council by the original developers of the property. Graceview Industrial Park is selected as the best location because of the following reasons:

- Strategically located next to the Heineken Sedibeng facility
- Availability of ample land for industrial zone development
- Located in close proximity to the national highway network
- Ease of access to raw materials
- Availability of variety of types of labor and creation of employment opportunities

Objective and Justification of the Project

Objective of the Project

- The objective of the project is the establishment of a malt production plant with annual capacity of 100kT in Phase 1 and 135kT in Phase 2 for the local market. Justification of the Project
- The Soufflet Malting Project greatly contributes as import substitution and for the enhancement of barley production for the agricultural sector in the country.

New Malt Plant Project Design and Components

Project Design

The initial malt house capacity will be 93 KT/year of malt with a future capacity of 135 KT/year and will consist of the following key components (Table 1). The Project will provide the adjoining Heineken Brewery with malt via a conveyor system. The malt plant will be operational for up to 50 years.

The Project (26.4313° S, 28.0701° E) is located to the south of the Heineken Sedibeng Brewery within a greenfield area in the Sedibeng District and Midvaal Local Municipality. The study area is approximately 10ha on Erf 244 Graceview and is owned by Heineken. The R59 road runs east of the proposed study area, with the Heineken Solar PV Plant located to the west. The Heineken Sedibeng Brewery forms part of the Kliprivier Business Park. “

Table 1: Key Components of the Project

General Arrangement of Proposed Buildings	Description
Working building	<ul style="list-style-type: none"> • The process of barley intake, cleaning and grading and malt blending, cleaning and bulk shipping will take place at this building. • Pit for grain will be arranged in front of the processing tower for receiving and shipping by truck. • Several bins with steel support structure will be situated on beams system of the building. • Conveyor systems also run inside the building.

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page 7

General Arrangement of Proposed Buildings	Description
Barley storage	<ul style="list-style-type: none"> Storage of barley before the malting process starts.
Malt storage	<ul style="list-style-type: none"> Storage and distribution of malt.
Steeping building	<ul style="list-style-type: none"> The barley steeping process will occur in this building. Steeping tanks with steel support structures will be arranged inside the building. There will be conveyor system for transferring malt from here to the germination vessels.
Germination vessels	<ul style="list-style-type: none"> The germination process will occur in these vessels.
Kilning vessel	<ul style="list-style-type: none"> This building is where the kilning process takes place. The kilning process occurs at various degrees Celsius ranging from 40°C to 90°C.
Malt dispatch	<ul style="list-style-type: none"> Malt dispatch will be via a conveyor system between the malt plant and the Heineken Brewery.
Energy system	<ul style="list-style-type: none"> Capacity of the combined heat and power genset (CHP) (including back up system) - 8MW of heating energy, 4MW of cooling energy and 3MW of electrical power through the CHP Plant, heat pumps and heat exchangers. 70GWh gas for CHP will be used. Capacity of the boilers (back-up) – 2 x 8MW using liquified natural gas (LNG) as a fuel source Approximately 70GWh of gas will be used per year. The Solar PV Project will not form part of the project scope but will be considered in future.
Administration building	<ul style="list-style-type: none"> The administration building contains the following functions: office space, meeting room, laboratory, security/weighbridge office, canteen, toilet, lockers, and dressing rooms. This building is a single storey structure is a local designed building with traditional features optimised to facilitate the corporate identity. The canteen and lockers are to serve an assumed 50 personnel with an estimated max. 40 persons in the day shift.
Workshop and spare parts	<ul style="list-style-type: none"> The building will comprise of welding workshop, forklift maintenance, storage area, office, and ablutions
Electrical buildings	<ul style="list-style-type: none"> Switch gear and transformers.
Water storage	<ul style="list-style-type: none"> The malting process consumes large amounts of water on a daily basis. The expected water usage for the current mandate based on the process mass energy balance spreadsheet is projected at 1000 m³/day peak load. The arrangement of the water storage tanks is described below: <ul style="list-style-type: none"> One (1) freshwater tank of 1000 m³ available water storage volume. This volume includes 10% spare capacity for malt production usage demand for 24 hours. One (1) process water tank of 1000 m³ available water storage volume. This volume including the option to be 50% recycled water.
Wastewater storage and treatment plant	<p>Effluent will either be discharged directly into ERWAT and on-site treatment of wastewater may only be considered as an alternative option.</p> <p>Process wastewater:</p> <ul style="list-style-type: none"> Volume of wastewater stored in Reservoir below Steeping Building – 1000m³. <p>Treatment of the following wastewater streams:</p> <ul style="list-style-type: none"> Domestic sewage/wastewater from the Administration building. Industrial effluent/wastewater emanating from the washing and germination process of a maximum of 900 m³/d. Volume of wastewater treated per day – 575m³ (Phase 1). Concrete tank at the bottom of the steeping building which will serve as (bulk) process effluent storage with a capacity of 1000m³.

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page 8

General Arrangement of Proposed Buildings	Description
Ammonia storage	<ul style="list-style-type: none"> Approximately 1.5 tonnes (2000m³).
Ancillary infrastructure	Construction lay-down area, Internal conveyor system to transport grain between the Steeping building, Germination vessels, Kilning area, Bagging and chemical storage buildings, Fire pump room, gatehouse, weighbridge, truck staging area, waste pick-up area, internal access roads, staff parking.

3 ASSESSMENT METHODOLOGY

The section below outlines the assessment methodologies utilised in the study.

3.1 Methodology for Assessing Heritage Site significance

This HIA report was compiled by PGS for the proposed Soufflet Malt new greenfield malt production facility. The applicable maps, tables and figures are included, as stipulated in the NHRA (no 25 of 1999) and the National Environmental Management Act (NEMA) (No. 107 of 1998). The HIA process consists of three steps:

Step I – Literature Review and initial site analysis: The background information to the field survey relies greatly on the Heritage Background Research which was undertaken through archival research and evaluation of satellite imagery and topographical maps of the study area.

Step II – Physical Survey: A physical survey was conducted by a combination of vehicle and pedestrian access through the proposed project area by one qualified heritage specialist and one field assistant (21 May 2024), aimed at locating and documenting sites falling within and adjacent to the proposed development footprint.

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

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

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

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page 9

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

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

Impacts on these sites by the development will be evaluated as follows:

3.1.1 Site Significance

Site significance classification standards use is based on the heritage classification of s3 in the NHRA and developed for implementation keeping in mind the grading system approved by SAHRA for archaeological impact assessments. The update classification and rating system as developed by Heritage Western Cape (2021) is implemented in this report.

Site significance classification standards prescribed by the Heritage Western Cape Guideline (2016), were used for the purpose of this report (**Table 2** and **Table 3**).

Table 2: Rating system for archaeological resources

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

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page 10

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

Table 3: Rating system for built environment resources

Grading	Description of Resource	Examples of Possible Management Strategies	Heritage Significance
I	Heritage resources with qualities so exceptional that they are of special national significance. Current examples: Robben Island	May be declared as a National Heritage Site managed by SAHRA.	Highest Significance
II	Heritage resources with special qualities which make them significant in the context of a province or region, but do not fulfil the criteria for Grade I status. Current examples: St George's Cathedral, Community House	May be declared as a Provincial Heritage Site managed by Provincial Heritage Authority.	Exceptionally High Significance
II	Such a resource contributes to the environmental quality or cultural significance of a larger area and fulfils one of the criteria set out in section 3(3) of the Act but that does not fulfil the criteria for Grade II status. Grade III sites may be formally protected by placement on the Heritage Register.		
IIIA	Such a resource must be an excellent example of its kind or must be sufficiently rare. These are heritage resources which are significant in the context of an area.	This grading is applied to buildings and sites that have sufficient intrinsic significance to be regarded as local heritage resources; and are significant enough to warrant that any alteration, both internal and external, is regulated. Such buildings and sites may be representative, being excellent examples of their kind, or may be rare. In either case, they	High Significance

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page 11

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

3.2 Methodology used in determining the significance of environmental impacts

The methodology used to determine the environmental impact significance was provided by Royal Haskoning DHV and is explained in **Appendix B**.

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page 12

4 CURRENT STATUS QUO

4.1 Site Description

The proposed Soufflet Malt production facility footprint area is characterised by flat grass land industrial infrastructure (**Figure 3** to **Figure 6**). The property was previously ploughed for crop cultivation as evidence from aerial photographs (**Figure 11** and **Figure 14**). The proposed pipeline section of the footprint follows the highly developed infrastructure of the Klipriver Business Park in the North, runs along the R59 Provincial Road, passes parallel to cultivated lands in the South and veers off towards the Klip River as its end point.

The footprint is entirely characterised by Carletonville Dolomite Grassland, it is described in Mucina and Rutherford (2006:388) as:

Distribution North-West (mainly) and Gauteng and marginally into the Free State Province: In the region of Potchefstroom, Ventersdorp and Carletonville, extending westwards to the vicinity of Ottoshoop, but also occurring as far east as Centurion and Bapsfontein in Gauteng Province. Altitude 1 360–1 620 m, but largely 1 500–1 560 m.

Vegetation & Landscape Features Slightly undulating plains dissected by prominent rocky chert ridges. Species-rich grasslands forming a complex mosaic pattern dominated by many species.

Geology & Soils Dolomite and chert of the Malmani Subgroup (Transvaal Supergroup) supporting mostly shallow Mispah and Glenrosa soil forms typical of the Fa land type, dominating the landscapes of this unit. Deeper red to yellow apedal soils (Hutton and Clovelly forms) occur sporadically, representing the Ab land type.”

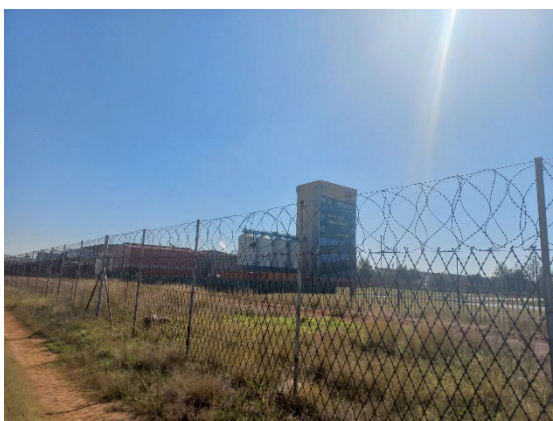


Figure 3 – Current Heineken Brewery

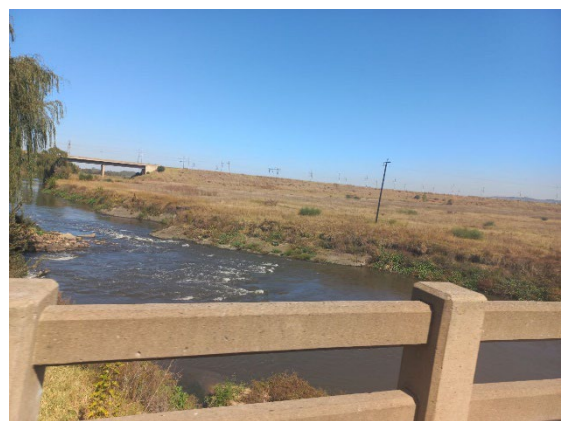


Figure 4 – Klip Rivier

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page 13



Figure 5 – Midvaal Pump Station



Figure 6 – The R59



Figure 7 – Carletonville Dolomite Grassland with agricultural activities seen in the background.




Figure 8 - Satellite imagery depicting the malt production facility superimposed on the clearly tilled soil.

4.2 Overview of the study area and surrounding landscape

DATE	DESCRIPTION
2.5 million to 250 000 years ago	<p>The Earlier Stone Age (ESA) is the first phase identified in South Africa's archaeological history and comprises two technological phases. The earliest of these is known as Oldowan (2.6 – 1.5 Myr) and is characterised by expedient yet organised flaking systems, with primarily core- and flake-based assemblages. The second technological phase is the Acheulian industry (1.7 Myr – 250 kyr) which is comprised of Large Cutting Tools (i.e. handaxes and cleavers) and organised core reduction (i.e. Levallois).</p> <p>Several ESA sites are known from the confluence of the Klip, Suikerbosrand and Vaal Rivers in proximity to the town of Vereeniging. These sites include Klipplaatdrift, River View Estates and Three Rivers (Bergh 1999). Another Early Stone Age was identified by C Van Riet Lowe during the late 1940s near Henley-on-Klip (Van Riet Lowe & Van der Elst, 1949).</p> <p>Several Acheulean-bearing sites are known from the Vereeniging area. According to Bergh (1999) these include Waldrif, Drie Riviere, Duncanville, Riverview Estates. The Duncanville Archaeological Reserve was proclaimed as a National Monument in 1944 (Oberholster, 1972). The site contains many Acheulian stone implements lying</p>

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page 14

DATE	DESCRIPTION
	<p>on the surface of the gravel beds deposited by the Vaal River several million years ago. A similar site is located at the Klip River Quarry (also now a Provincial Heritage Site). Both sites were discovered initially by T N Leslie, an engineer, and later investigated by Van Riet Lowe, who was instrumental in them being declared as National Monuments. These two sites were both excavated by Revil Mason between 1960/61 (Prins, 2005)</p>  <p><i>Figure 9 - Revil Mason and spectators at the Van Riet Louw Archaeological Reserve c. 1965 (Vaal Teknorama- Prins 2007).</i></p>
250 000 to 40 000 years ago	<p>The Middle Stone Age (MSA) is associated with flakes, points and blades manufactured by means of the so-called 'prepared core' technique. This phase is furthermore associated with modern humans and complex cognition (Wadley 2013). Although not many MSA sites are known from this area, besides the later mentioned Vereeniging Sites, MSA stone tools were identified on a property in Meyerton in stratigraphic context for an HIA undertaken in 2017 (Fourie 2017). No in depth archaeological work has been carried out in this area.</p>
40 000 years ago, to the historic past	<p>The Later Stone Age (LSA) is the third archaeological phase identified and is associated with an abundance of very small stone tools known as microliths. A Later Stone Age site is known from the farm Badfontein, roughly 17km south-east of the present study area (Bergh, 1999). An unidentified rock engraving site is known between the study area and Heidelberg (see Bergh, 1999). One identified LSA site has been found in the region of Meyerton (Huffman, 2008), although no archaeological work has been carried out in this area concerning this techno-complex.</p>
AD 1450 - 1650	<p>Evidence of the Late Iron Age (1500-1800 AD) is prevalent in the Suikerbosrand and Klipriviersberg area. Other Late Iron Age stone walled sites, dating from the 18th and 19th centuries, occur towards Alberton, along the rocky ridges of the eastern part of the Klipriviersberg (Huffman, 2007).</p> <p>This period is associated with a Late Iron group referred to as the Ntsuanatsatsi facies of the Urewe Tradition (Huffman, 2007). The Ntsuanatsatsi facies of the Blackburn Branch of the Urewe Ceramic Tradition represents the earliest known Iron</p>

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page 15

DATE	DESCRIPTION
	Age period within the region of the study area. The decoration on the ceramics from this facies is characterised by a broad band of stamping in the neck, stamped arcades on the shoulder and appliqué (Huffman, 2007).
AD 1500 - AD 1700	The Olifantspoort facies of the Moloko Branch of the Urewe Ceramic Tradition is the next Iron Age facies to be identified within the surroundings of the study area. The key features of the decoration used on the ceramics from this facies include multiple bands of fine stamping or narrow incision separated by colour (Huffman, 2007).
AD 1650 - AD 1850	The Uitkomst facies of the Blackburn Branch of the Urewe Ceramic Tradition represents the third Iron Age period to be identified for the surroundings of the study area. The decoration on the ceramics associated with this facies is characterised by stamped arcades, appliqué of parallel incisions, stamping as well as cord impressions (Huffman, 2007). Based on the available archaeological and oral evidence from this period, the sixteenth and seventeenth centuries saw the movement of Sotho/Tswana communities from the lower lying Bushveld areas in the north (where they had been settled since AD 1500) toward the higher, predominantly grassland areas to the south. By AD 1650, these communities had successfully settled in these areas (Hall, 2007).
1700 - 1840	The Buispoort facies of the Moloko branch of the Urewe Ceramic Tradition is the next phase to be identified within the study area's surroundings. The key features on the decorated ceramics include rim notching, broadly incised chevrons and white bands, all with red ochre (Huffman, 2007).
c.1823s	By 1823 the Khudu were known to have resided in the general vicinity of the present study area, and especially near the confluence of the Suikerbosrant and Vaal Rivers (Bergh, 1999). This confluence is located roughly 5.70km south of the present study area.
1823 - 1827	During the so-called Difaqane, the Khumalo Ndebele (also known as the Matabele) of Mzilikazi established themselves along the banks of the Vaal River and pushed the Khudu further to the west (Bergh, 1999). In c. 1827 the Matabele moved further north and settled along the Magaliesberg Mountain and five years later in 1832 settled along the Marico River.
October 1834	A group of Griqua hunters under the leadership of Pieter David were hunting near the confluence of the Vaal and Wilge Rivers when they were attacked here by Mzilikazi's Khumalo Ndebele (Bergh, 1999).
Februar y 1836	Voortrekker leader Louis Trichardt moved with his party to the confluence of the Wilge and Vaal Rivers and stayed on the western bank of the Wilge for a while before crossing over the Vaal (d'Assonville, 2002). They subsequently met up with Lang Hans van Rensburg at Elandspruit, near present-day Heidelberg (Bergh, 1999).
1839	These years saw the early establishment of farms by the Voortrekkers in the general vicinity of the study area. The district of Potchefstroom was also established in 1839 (Bergh, 1999), of which the study area formed part.
1876- 1878	In December 1876 President Brand of the Republic of the Orange Free State acquired authority from his Volksraad to appoint Mr GW Stow to undertake prospecting surveys. In 1878 Stow conducted test shafts in the vicinity of the Taaiboschspruit and Vaal River confluence as well as on the farms Maccauvlei and Leeuwspruit. His investigations on both these latter farms indicated the presence of extensive coalfields (Leigh, 1968).
1880-	Subsequent to this discovery, Stow and Samuel Marks, the Kimberley diamond magnate, formed a company in 1880, to exploit the coal deposits and transport them to the Kimberley mines. The company was called " <i>De Zuid Afrikaansche en Oranje Vrijstaatsche Kolen en Mineralen Vereeniging</i> " and was later to become the nucleus of the <i>Vereeniging Estates Limited</i> . As a result, the farms Leeuwkuil, Klipplaatdrift, Maccauvlei and Rietfontein were acquired. The first mining activities were undertaken in the vicinity of the test shaft on Leeuwkuil, which later was to become Bedworth Colliery (Leigh 1968)

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page 16

DATE	DESCRIPTION
1882-1884	In 1882 the <i>Vereeniging Estates Limited</i> applied to the Zuid Afrikaansche Republiek to establish a village on the farms Leeuwkuil and Klipplaatdrift. On 4 July 1884 the Volksraad approved the application as well as the proposed name "Vereeniging", which was derived from the company's name (Leigh, 1968).
1899 – 1902	<p>During the Anglo Boer War (1899-1902) the town of Vereeniging had a significant role to play. This was largely due to its strategic value in that one of the main entry points from the Republic of the Orange Free State into the Zuid Afrikaansche Republiek was located in this area. The railway link between the two republics had also been established here (Leigh 1968).</p> <p>During the initial phase of the war, very few military activities took place in this area. However, after the defeat of the Boer forces in various places, and the British advance into the republics, the Vereeniging area became very significant. After the annexation of the Republic of the Orange Free State on 24 May 1900, Lord Roberts (the commander in chief of the British forces) was able to travel via railway line from Bloemfontein all the way to the Vaal River (Bergh, 1999). On 27 May 1900 the crossing of the main army over the Vaal River took place. Vereeniging was annexed on the same day.</p> <p>During the latter period of the war, the Boer forces divided themselves into smaller mobile units (commandos) and fought the British forces in a guerrilla war. In response to this tactic, the Boer farms of both republics were destroyed, while black and white men, women and children still residing on the farms were taken to various concentration camps. Such a camp was also established at Vereeniging. The camp was located on the farm Maccauvlei and was divided into a camp for the Boers and another camp for black people. The Boer camp in turn was divided between the Boer concentration camp (for prisoners-of-war, women and children) and a camp which housed Boers who had surrendered and joined the British forces as part of a Burgher Corps (Leigh, 1968).</p> <p>With time the Boer forces and their leaders started considering negotiating for peace. Sammy Marks offered the opposing sides a site for these negotiations at the Central Mine. Different tented camps were erected for the different participants, such as the Z.A.R leadership, Orange Free State republic leadership and the British leadership. The representatives for the Boer republics were President Steyn of the Orange Free State, as well as Generals Botha, Smuts, Hertzog, De La Rey and De Wet. The British were represented by Lords Milner and Kitchener. The negotiations undertaken here resulted in the eventual signing of the Peace Treaty of Vereeniging at Melrose House, Pretoria on Saturday, 31 May 1902 (Leigh, 1968).</p>
1904	On 17 August 1904 the Milner Government conferred municipal status on Vereeniging (Prins 2005).
1912	In 1912 the status of major municipality was conferred on Vereeniging and Leslie was elected mayor (Prins 2005).
1934 - 1938	The construction of the Vaal Dam was undertaken jointly by Rand Water and the Department of Irrigation. Construction commenced in 1934 and the aim of the dam was to address the rapidly increasing need for water of the population of the Witwatersrand. The dam wall was completed in 1938 with a wall height of 54.2 m above the lowest foundation and a full supply capacity of 994 million m ³ . In the early 1950s the wall was raised to 60.3m resulting in a capacity of 2 188 million m ³ . In 1985 the wall was raised to a height of 63.4m above the lowest foundation. This increased the capacity of the dam to 2 536 million m ³ (Birkholtz 2009).
21 March 1960	Although a number of important political events took place in the general area, including the massacre at Boipatong on 17 June 1992, the most significant of these was probably the tragedy of Sharpeville, which took place on 21 March 1960. Sharpeville is a township situated near Vereeniging and is located to the west of the present study area. On 16 March 1960 the Police Commissioner was informed by the head of the Pan Africanist Congress, Robert Sobukwe, that a protest campaign

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page 17

DATE	DESCRIPTION
	<p>against pass laws will be held on 21 March 1960. The aim of the campaign was for black people to leave their passes at home, and to report in their thousands at different police stations, thereby overcrowding the jails and forcing the government to make concessions.</p> <p>By 10 am on the morning of 21 March 1960 a group of between 3000 and 5000 gathered in the centre of Sharpeville. Similar events also took place in neighbouring areas such as Boipatong and Evaton. The group from Sharpeville marched to the Sharpeville police station, where a tense situation soon started developing. By one o'clock police reinforcements were called for and started arriving. The police force now consisted of 300 policemen who were supported by armoured vehicles.</p> <p>At 13:15 a scuffle broke out after which the fence surrounding the police station was trampled and a police officer pushed over. Simultaneously the front ranks of the crowd pushed forward, which resulted in the police opening fire without any order to do so.</p> <p>The crowd panicked and fled. Sixty-seven protesters (including children) were killed, while 186 people were wounded.</p> <p>The news of the Sharpeville tragedy carried across the world's press, and focused international attention on the political situation and injustices taking place in South Africa (www.sahistory.co.za; Birkholtz 2009).</p> <p>The 21st of March is still annually commemorated in South Africa today as Human Rights Day.</p>

4.2.1 Archaeological Background

STONE AGE

Archaeological investigations in the Vereeniging-Meyerton area date to the late 1930's when C. van Riet Lowe investigated the occurrence of archaeological materials stratified within the Vaal River Gravel sequence. This led to the discovery of several sites near Vereeniging and Meyerton, which preserved Large Cutting tools (LCTs) from the Acheulean Industry (Fourie 2017). This established an ESA sequence that is collectively known as the 'Three Rivers Sites' (Kuman 2007) or the 'Vereeniging Sites') which include **Klip River Quarry**, Henley-on-Klip, Badfontein and the Meyerton Townlands (van Riet Lowe & van der Elst, 1949; le Roux & le Roux, 1959; Fourie 2017).

The 'type site' of the Vaal River Gravel sequence, for the Vereeniging sites mentioned above, is the Klip River Quarry, discovered by C. van Riet Lowe (1937). The gravel sequence of this area comprises rocks of shales and sandstones from the Karoo Supergroup with diabase intrusions (dolerites and andesites). The latter rock types are the major toolstone materials utilized in Acheulean assemblages. Characteristic Acheulean LCTs were discovered, including handaxes and cleavers, yet detailed descriptions of this assemblage have not been provided. The loose sandy levels that overlie the Acheulean gravels contain artefacts dating to the Fauresmith and the MSA (Breuil 1943). Mason (1962) describes the MSA of the Klip-Vaal Valley through geometrical terms such as pyramidal, cuboid, circular and triangular. The Klip River quarry site was proclaimed as a National Monument in (also a Provincial Heritage Site). This site's buffer zone intersects the current footprint (**Figure 15**). Since this sites proclamation in 1944 various factors have led to its dilapidated state (see Prins 2007) and currently only the train station is visible (**Figure 10**). Some

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page 18

of the archaeological material recovered from the Three River sites now reside in museums overseas (Prins 2007).



Figure 10 - The current development state of the Klip River Quarry site. A train station occupies the site.

Another site similar to the Klip River Quarry, is the Duncanville Archaeological Reserve. The Duncanville was proclaimed as a National Monument in 1944 (Oberholster, 1972). In terms of the NHRA the site is now protected as a Provincial Heritage Site. This site was proclaimed due to the large number of stone implements dating to the Acheulian period of the Early Stone Age which were discovered on the surface of the Vaal River gravel beds.

Both of the above proclaimed sites were initially discovered by T N Leslie, an engineer, and later investigated by Van Riet Lowe, who was instrumental in them being declared as National Monuments. These two sites were also excavated by Revil Mason between 1960/61 (Prins, 2005).

A further known site in the nearby area the Meyerton Townlands site, which was briefly reported by le Roux and le Roux in 1959 (Fourie 2017). Trenches excavated by the Rand Water Board exposed gravels associated with the Klip River from which over 100 artefacts made on quartzite were collected. LCTs were produced through bipolar and large-flaking techniques, similar to other assemblages from the Vereeniging Sites (Fourie 2017).

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page 19

IRON AGE

Evidence of the Late Iron Age (1500-1800 AD) is prevalent in the Suikerboschrand and Klipriviersberg area. Stone kraals and remnants of stone dwellings of the Sotho -Tswana peoples have been found. Other Late Iron Age stone walled sites, dating from the 18th and 19th centuries, occur towards Alberton, along the rocky ridges of the eastern part of the Klipriviersberg (Huffman, 2000).

Iron Age sites have been identified in an AIA produced by Huffman (2008) for the Mountain View development on Farm Nooitgedacht 176 IR, Gauteng. Stone walling and ceramic residues were identified at several localities near Perdeberg Hill, located on Farm Nooitgedacht. Some ceramics were associated with the "Uitkomst facies" (AD 1800) and of high significance (Fourie 2017).

REDAN ROCK ENGRAVING SITE (PROVINCIAL HERITAGE SITE)

The rock engraving site of Redan, is also believed to date to the Late Iron Age. In 1891 T.N. Leslie, an emigrant from England who was employed by Marks settled on the farm Leeuwkuil and opened the Wildebeest Quarry in the area close to the confluence of the Klip River and the Vaal River. While excavating for building stone, he discovered that the area was exceptionally rich in fossil plants, Early Stone Age tools and rock engraving sites. He discovered that rock engravings occurred on both the farms Klipplaatdrift and Leeuwkuil as well as on the farm Kookfontein. However, the inclusion of Klipplaatdrift and Leeuwkuil in the town of Vereeniging, subsequently destroyed those sites. The engravings on Kookfontein were saved only because the farm was excluded from the plans for the new town (Prins 2005).

The rock engravings at Kookfontein were temporarily in the news in 1936 when the Klip Power Station was erected by ESCOM on a portion of the farm Waldrift No. 599, very close to the rock engraving site on the adjoining farm Kookfontein (Prins 2005). These two farms, bought originally in 1888 by Donald McKay, were both coal-bearing, and coal mining was conducted at the Meyerton Colliery on Kookfontein. To supply sufficient fuel to the Klip Power Station McKay Estates entered into a contract with Amalgamated Collieries and Springfield Colliery was established at Kookfontein some distance away from the engraving site (Prins 2005: 49-50).

A small settlement and a post office were subsequently established on Waldrift. The closest railway station was Redan and the settlement adopted the name of Redan. The adjoining rock engraving site at Kookfontein also became known as the Redan rock engraving site (Prins 2005).

Prins (2005) notes that Van Riet Lowe published the first systematic index of rock art sites, Prehistoric Art in South Africa in 1941, which included the farm Kookfontein No. 187 among four sites in the Vereeniging area.

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page 20

The engraving site of Redan was researched by A.R. Willcox and H.L. Pager in 1967. Willcox and Pager copied all the petroglyphs by drawing them to scale and recorded a total of 244 petroglyphs, the majority of which comprised geometrical designs. Besides the petroglyphs, Willcox and Pager also documented 21 flattened or smoothed surfaces produced by rubbing or grinding activities. Willcox and Pager considered that the weathering of the surfaces of the petroglyphs suggested an estimated age of between 500 and 100 years; they were therefore probably made by the San people (Kovacs 1998).

In terms of the NHRA this site is now a formally protected Provincial Heritage Site. It was previously declared as a National Monument in 1971 (Prins 2005; SAHRIS). However, subsequent to 1994, and the replacement of the Vereeniging Town Council with the Lekoa Vaal Metropolitan Council, the farm Kookfontein that had been owned and managed by the Town Council and on which Redan is situated, was sold to a private individual, K. Badenhorst. According to the most recent information, portion 29 of Kookfontein 545 IQ is now owned by a brickwork company, Ocon Brick Pty Ltd. The local community is very aware of the site and it has been recently highlighted by the local press with regard to another proposed mining project (Vaal Weekblad, 27 February 2020).

FOSSILISED FOREST

Prins notes that in addition to the archaeological sites discovered by Leslie, he also discovered the remains of a fossilised forest on the exposed bed of the Vaal River, in 1906 when he built a weir to dam the river in order to stabilise the water supply to the coal mine and other industries, This fossilised forest was later completely submerged when the Vaal River Barrage was built in 1923 by the Rand Water Board (Prins 2005: 42-43).

4.2.2 Archival and historical maps

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

Historical topographic maps (1:50 000) for various years (1939, 1944, 1957 and 1979) were available for utilisation in the background study. These maps were assessed to observe the development of the area, as well as the location of possible historical structures and burial grounds. The study area was overlain on the map sheets to identify structures or graves situated within or immediately adjacent to the study area that could possibly be older than 60 years and thus protected under Section 34 and 36 of the NHRA.

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page 21

Figure 11, Figure 12 and **Figure 13**, indicate hut settlement and agriculture in the northern section of the study area. Due to this observation, potential for unmarked burials and remains of the housing remain however, by 1979 (**Figure 14**) initial development of the area has displaced most of the settlement. Currently through the area's industrialisation (seen in **Figure 2**) most of the archaeological/historical remains have probably been developed.

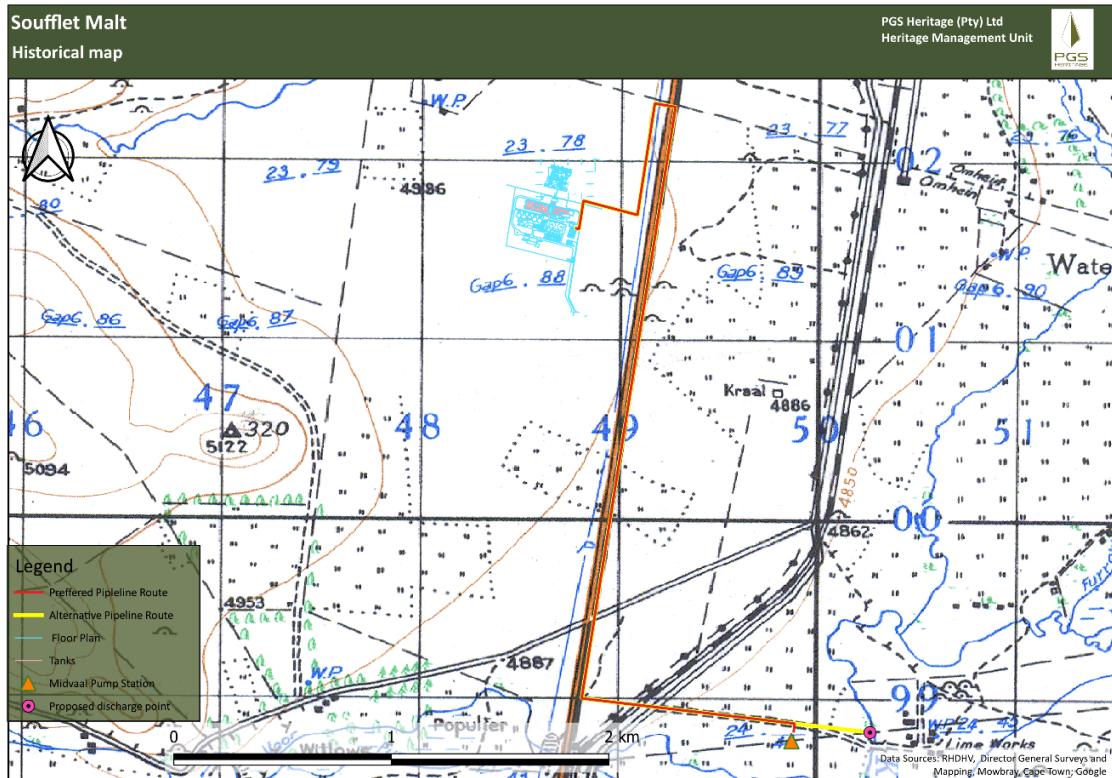


Figure 11 - Historical map 2628AC 1st ed. (1939). Huts can be seen adjacent the study area.

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page 22

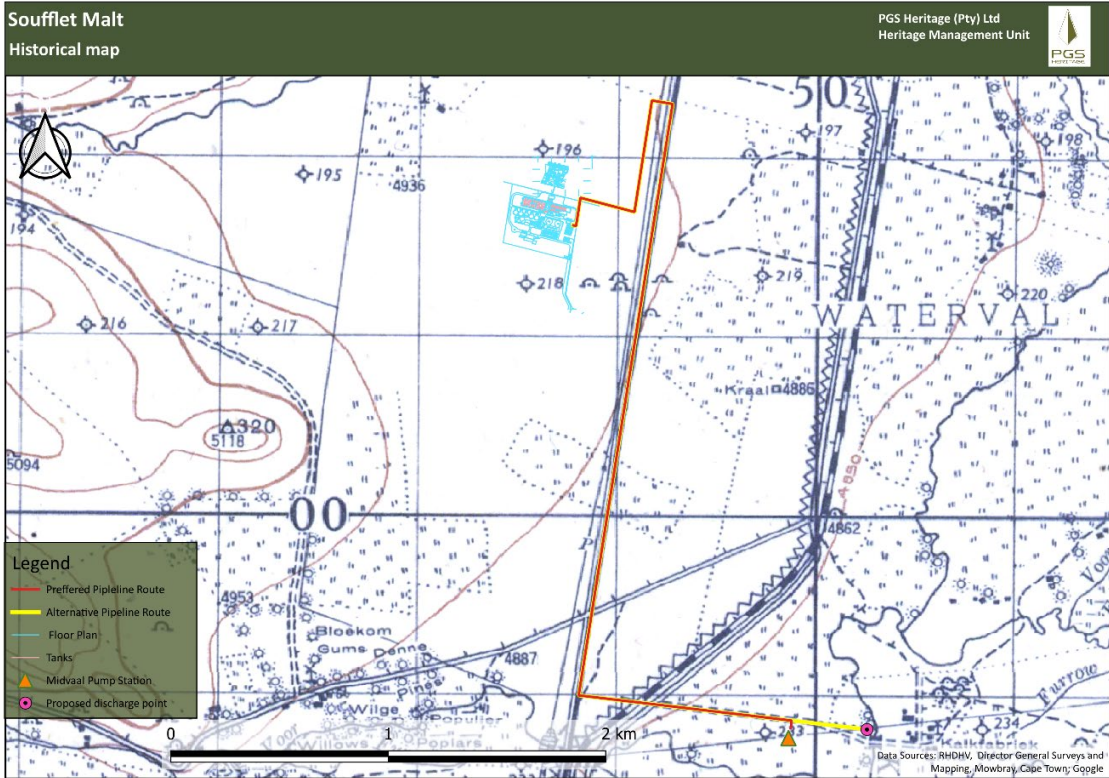


Figure 12 - Historical map 2628AC 2nd ed. (1944). Huts are still seen adjacent the study area.



Figure 13 - Historical map 2628AC 3rd ed. (1957). Huts have been moved but are still adjacent the study area.

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page 23

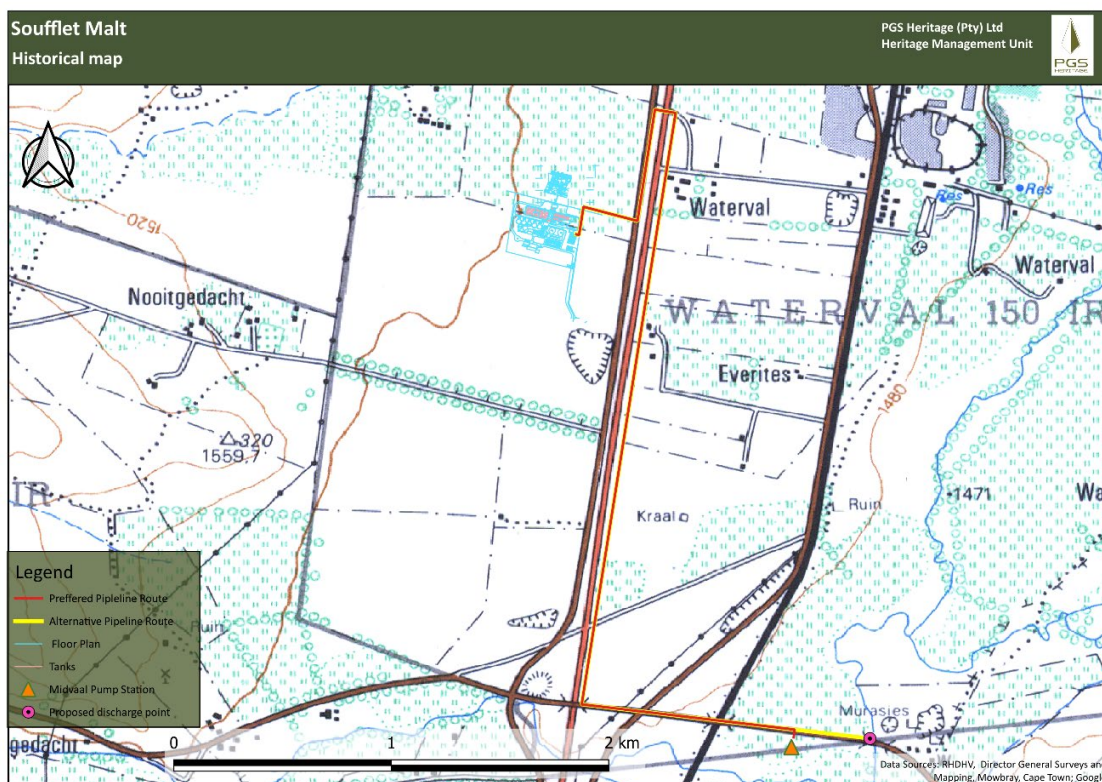


Figure 14 - Historical map 2628AC 4th ed. (1979). Huts are no longer visible. The ruins (Murasies) are 90m away from the proposed discharge point.

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

A search of the South African Heritage Resources Information System (SAHRIS) database revealed that several previous archaeological and heritage impact assessments had been undertaken within the surroundings of the study area. In each case, the results of each study are shown in bold. These previous studies are listed below in ascending chronological order:

- PISTORIUS, JJ. 2007. A Phase I Heritage Impact Assessment Study for Water and Sewage Pipeline Corridors near Vanderbijlpark in the Gauteng Province of South Africa. This study identified the following types of heritage resources: **two historical graveyards, a number of historical houses near Houtkop, historical stone structures, historical houses located in one of the suburban areas of Vanderbijlpark.** The proposed route corridors are located roughly 6.50km south-west of the current project area.
- COETZEE, FP. 2008. Cultural Heritage Survey of the Proposed Development of Portion 53 of the Farm Kookfontein 545-IQ, Rothdene, Midvaal Local Municipality. For Triviron EAP. **No archaeological or historical resources were recorded during the survey.** The

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page 24

study area is located immediately adjacent to the north-east section of the current project area.

- PELSER A.J. & VAN VOLLENHOVEN A.C. 2009. A Report on a Heritage Impact Assessment Study for the Powerline from Glockner-Kookfontein Substations Vereeniging, Gauteng. For: Baagi Environmental Consultancy CC. **No objects, features or any sites of cultural (archaeological or historical) heritage significance were identified in the area of proposed development.**
- PELSER A.J. 2011. A Report on a Heritage Walkdown Study for the Proposed New 275kv Powerline between the Glockner-Kookfontein Substations Vereeniging, Gauteng. For: Baagi Environmental Consultancy CC. **No cultural heritage (archaeological or historical) sites, features and objects of significance were identified during the Walk Down survey.**
- SELIANE, M. 2013. KaNgwane South Anthracite Mine: Heritage Impact Assessment. **No cultural heritage (archaeological or historical) sites, features and objects of significance were identified.**
- PELSER A.J. 2013. Basic Assessment Report for a Waste Management License Application, DMS Powders, Meyerton Portions 4 & 63 of Kookfontein 545IQ, Gauteng. For: Shangoni Management Services (Pty) Ltd. **No sites, features or objects of any archaeological or historical (cultural heritage) significance were identified during the fieldwork.**
- VAN SCHALKWYK, J. 2013. Heritage Impact Assessment for the Proposed Construction of Eskom Five (5) 88kv Powerlines Connecting Kookfontein and Jaguar Substations, Midvaal and Emfuleni Municipalities, Gauteng Province. Eight heritage resources were identified, of which six are situated within or close to the current project area. The six sites include: **the rock engraving site of Redan (Provincial Heritage Site), a Stone Age findspot, three cemetery or informal grave sites and a stone railway culvert.**
- KÜSEL, U. 2014. Proposed Design & Construction of K77 between Elizabeth Rd and K154, Midvaal, Gauteng. **No sites, features or objects of any archaeological or historical (cultural heritage) significance were identified during the fieldwork.**

FOURIE, W. 2017. Finding on Possible Exemption from a Heritage Impact Study: Mixed Use Development on Portion 81 of the Farm Rietfontein 364IQ, Meyerton, Gauteng

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page 25

Province. Although large sections of the property were heavily degraded and had in the past been used for dumping and backfilling of quarries, there were two areas identified with **high density scatters or remnants of Early (ESA) and Middle Stone Age (MSA) material.**

- FOURIE, W. 2017. Archaeological Impact Assessment for Meyerton Mall and Residential Development on Portion 64 of Portion 81 of the Farm Rietfontein 364IQ, Meyerton, Gauteng, Province. This report was a follow-up survey of the two areas identified in the previous study. **Thirteen specific sites/findspots were identified containing mostly Middle Stone Age (MSA) stone tools, and a few Late Stone Age (LSA) stone tools.**

- FOURIE, W. 2019. Request for Exemption From a Heritage Impact Study: Solink Power Procurement (Pty) Ltd (Solink) - Development of a Small-Scale Solar Photovoltaic (Pv) Facility to Supplement Processing Power Requirements for The Adjacent Heineken Sedibeng Brewery, Located Within Sedibeng in the Gauteng Province. **No sites, features or objects of any archaeological or historical (cultural heritage) significance were identified during the fieldwork.**

- VAN DER WALT, J. 2021. Heritage Impact Assessment for The Proposed Rietspruit Township Development on Portion 8 of the Farm Rietspruit 152-Ir, Within the Jurisdiction Of Midvaal Local Municipality, Gauteng Province. **The study found: two cemeteries, a contemporary farmhouse complex with historical elements and the ruins of farm labourer housing.**

- Angel, J. 2024. Heritage Impact Assessment – Proposed Springfield Colliery and Redan Siding Situated between Vereeniging and Meyerton, in the Sedibeng District Municipality, Gauteng province. **Here fifteen heritage resources were located, they included: six burial grounds/graves, five historical Springfield Colliery/Kilp Power Station structures, two railway structures, the documented rock engraving site: Redan, and finally the remains of a dairy and stone crushing factory.**

- Angel, J. 2024. Heritage Impact Assessment – Proposed Proposed Vlakfontein Colliery
- Siding Situated between Vereeniging and Meyerton, in the Sedibeng District Municipality, Gauteng province. **Here structural remains of ruins, two historic houses and two recent structures were found.**

4.2.4 Heritage screening

A heritage screening report was compiled by the Department of Environmental Affairs National Web-based Environmental Screening Tool as required by Regulation 16(1)(v) of the Environmental

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page 26

Impact Assessment Regulations 2014, as amended. According to the heritage screening report, the project area mostly has a Low Heritage Sensitivity, while the northern section intersects a Provincial Heritage Site (Klip River Quarry) giving it a High Heritage Sensitivity rating (**Figure 15**). The fieldwork has shown that no archaeological and heritage resources were present in the area and thus the original screening rating is supported.

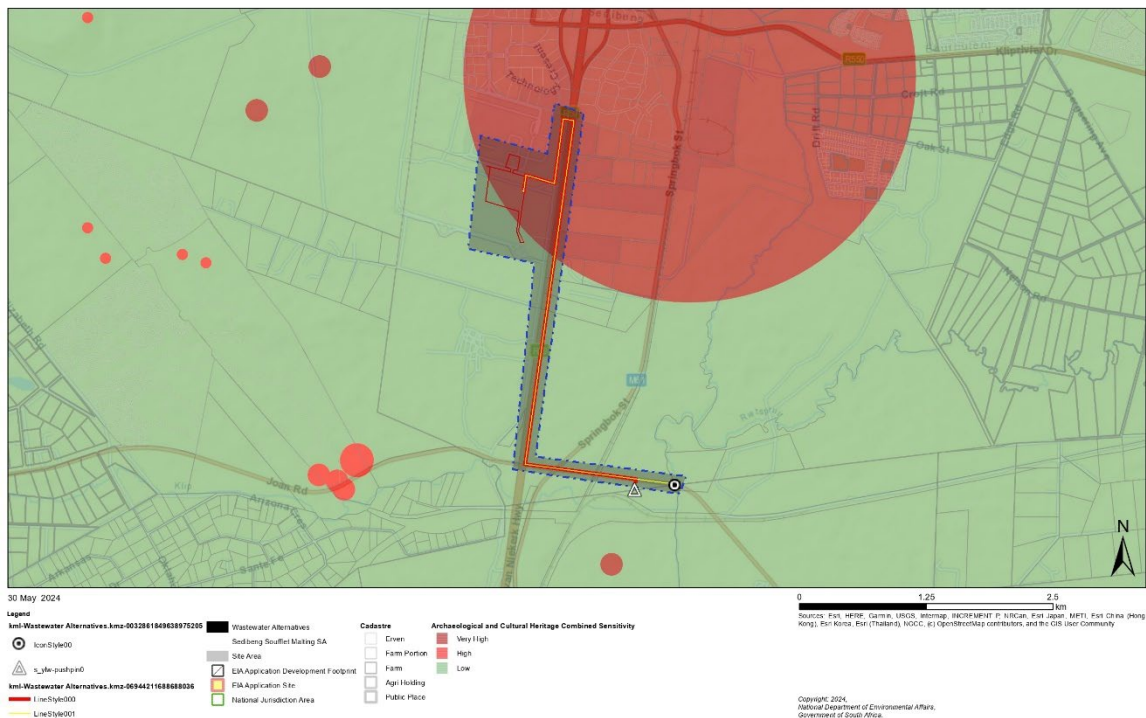


Figure 15 - Screening tool map indicating a high sensitivity rating for archaeology and heritage

4.2.5 Heritage sensitivity

Analysis of maps and satellite imagery enabled the identification of possible heritage sensitive areas. By superimposition and analysis, it was possible to rate these structures according to age and thus their level of protection under NHRA. **Table 4** lists the possible tangible heritage sites identified in the vicinity of the study area and the relevant legislative protection.

Table 4: Tangible heritage site in the study area.

Name	Description	Legislative protection
Archaeology	Older than 100 years	NHRA Sections 3 and 35
Structures	Possibly older than 60 years	NHRA Sections 3 and 34
Burial grounds	Graves	NHRA Sections 3 and 36 and MP Graves Act

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page 27

Additionally, evaluation of satellite imagery has indicated the following areas that may be sensitive from a heritage perspective. The analysis of the studies conducted in the area assisted in the development of the following landform type to heritage find matrix (**Table 5**).

Table 5: Landform type to heritage find matrix

LANDFORM TYPE	HERITAGE TYPE
Crest and foot hill	LSA and MSA scatters, LIA settlements
Crest of small hills	Small LSA sites – scatters of stone artefacts, ostrich eggshell, pottery and beads
Water holes/pans/rivers	MSA and LSA sites, LIA settlements
Farmsteads	Historical archaeological material
Ridges and drainage lines	LSA sites, LIA settlements

4.3 Fieldwork findings¹

The fieldwork was conducted on the 21st of May 2024 by a field team of PGS Heritage. Their movement on site was tracked by GPS and a tracklog map can be seen in **Figure 16**.

During the fieldwork a total of two heritage resources were identified. Both the old road (**SM01**) and old pipeline (**SM02**) markers were rated as having a Low heritage grading and are not conservation worthy (NCW) as they contain no cultural or scientific value. See the individual site descriptions as contained in **Appendix C**. The field description forms were collected with ArcGIS Survey123 in field software.

It should be noted that during the fieldwork, in the aforementioned tilled and worked soils (**Figure 18**) of the malt facility floor plan, a single quartzite lithic artefact (flake see **Figure 17**) was seen. Given its density and displaced nature no scientific value can be immediately attached however given that the lithic was seen in the currently protected Provincial Heritage Sites' buffer, astute attention should be given to the Chance Finds Procedure during the construction phase.

Therefore, in conclusion, during the fieldwork no heritage resources of any conservation value were identified.

¹ Site in this context refers to a place where a heritage resource is located and not a proclaimed heritage site as contemplated under s27 of the NHRA.

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page 28

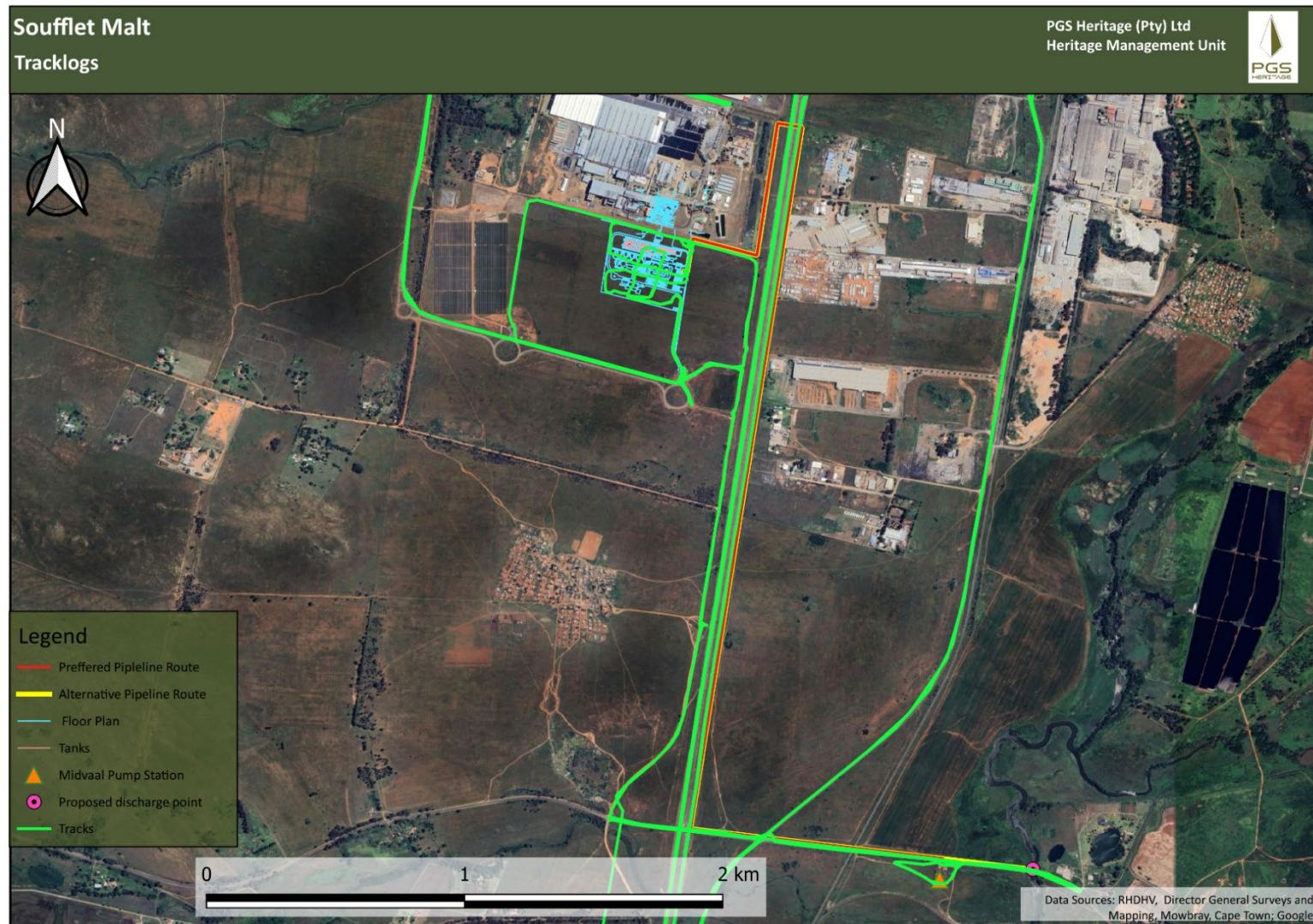


Figure 16 - Fieldwork tracklogs (track in green)

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page 29



Figure 17 - View of a singular scattered lithic artefact exposed from the tilled soils at the proposed malt facility.



Figure 18 - Field clearing of the tilled soil at the proposed malt facility.

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page 30

5 IMPACT ASSESSMENT

The impact assessment rating is based on the rating scale as contained in **Appendix B**.

The following section provides an analysis of the impact of the proposed project area on heritage resources.

5.1 Details of all alternatives considered

This section describes alternative means of carrying out the operation and the consequences of not proceeding with the proposed project.

The “no-go” alternative refers to the option of not going ahead with the proposed project. This will entail maintaining the current status quo with no impact from the project.

5.1.1 Heritage

As no heritage features of cultural significance were located, the impact significance during the construction phase is rated as LOW before and after mitigation.

5.2 Impact assessment summary table

Implementing the impact assessment methodology as supplied by Royal Haskoning DHV, : provides a quantitative assessment of the impacts of the proposed Soufflet Malt Project.

Table 6: Impact Table

Site	Occurrence		Severity		Impact
Impact	Probability of occurrence	Duration of occurrence	Scale/extent of impact	Magnitude (severity) of impact	SP Rating
Damage/ destruction to archaeological heritage	Medium Probability	Permanent	Site only	Minor	Low
Pre-mitigation	3	5	1	2	24
Damage/ destruction to archaeological heritage	Low Probability	Permanent	Site only	Minor	Low
Post-mitigation	2	5	1	2	16

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page 31

6 MANAGEMENT RECOMMENDATIONS AND GUIDELINES

The following section must be read in conjunction with **Table 8** of this report.

6.1 Construction and operational phases

The project will encompass a range of activities during the construction phase, including ground clearance, establishment of construction camp areas and small-scale infrastructure development associated with the project.

It is possible that cultural material will be exposed during construction and may be recoverable, keeping in mind delays can be costly during construction, and as such must be minimised. Development surrounding infrastructure and construction of facilities results in significant disturbance, however foundation holes do offer a window into the past and it thus may be possible to rescue some of the data and materials. It is also possible that substantial alterations will be implemented during this phase of the project, and these must be catered for. Temporary infrastructure developments, such as construction camps and laydown areas, are often changed or added to the project as required. In general, these are low impact developments as they are superficial, resulting in little alteration of the land surface, but still need to be catered for.

During the construction phase, it is important to recognize any significant material being unearthed, making the correct judgment on which actions should be taken. It is recommended that the following chance find procedure should be implemented.

6.2 Chance finds procedure

- A heritage practitioner / archaeologist should be appointed to develop a heritage induction program and conduct training for the ECO as well as team leaders in the identification of heritage resources and artefacts **during the implementation of the EMPr.**
- An appropriately qualified heritage practitioner / archaeologist must be identified to be called upon in the event that any possible heritage resources or artefacts are identified.
- Should an archaeological site or cultural material be discovered during construction (or operation), the area should be demarcated, and construction activities halted.
- The qualified heritage practitioner / archaeologist will then need to come out to the site and evaluate the extent and importance of the heritage resources and make the necessary recommendations for mitigating the find and the impact on the heritage resource.
- The contractor therefore should have some sort of contingency plan so that operations could move elsewhere temporarily while the materials and data are recovered.
- Construction can commence as soon as the site has been cleared and signed off by the heritage practitioner / archaeologist.

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page 32

6.3 Possible finds during construction

The study area occurs within a greater historical and archaeological site as identified during the desktop and fieldwork phase. Soil clearance for infrastructure as well as the proposed reclamation activities, could uncover the following:

- Historical structures and foundations
- Unmarked burial grounds and graves
- Stone Age artefacts

6.4 Timeframes

It must be kept in mind that mitigation and monitoring of heritage resources discovered during construction activity will require permitting for collection or excavation of heritage resources and lead times must be worked into the construction time frames. **Table 7** gives guidelines for lead times on permitting.

Table 7: Lead times for permitting and mobilisation

Action	Responsibility	Timeframe
Preparation for field monitoring and finalisation of contracts	The contractor and service provider	1 month
Application for permits to do necessary mitigation work	Service provider – Archaeologist and SAHRA	3 months
Documentation, excavation and archaeological report on the relevant site	Service provider – Archaeologist	3 months
Handling of chance finds – Graves/Human Remains	Service provider – Archaeologist and SAHRA	2 weeks
Relocation of burial grounds or graves in the way of the development	Service provider – Archaeologist, SAHRA, local government and provincial government	6 months

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page 33

6.5 Heritage Management Plan for EMPr implementation

Table 8: Heritage Management Plan for EMPr implementation

Area and site no.	Mitigation measures	Phase	Timeframe	The responsible party for implementation	Monitoring Party (frequency)	Target	Performance indicators (monitoring tool)
General project area	Implement a chance to find procedures in case where possible heritage finds are uncovered.	Construction	During construction	Applicant ECO Heritage Specialist	ECO (monthly / as or when required)	Ensure compliance with relevant legislation and recommendations from SAHRA under Section 34-36 and 38 of NHRA	ECO Monthly Checklist/Report

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page 34

7 CONCLUSIONS AND RECOMMENDATIONS

PGS Heritage (Pty) Ltd was appointed by Royal Haskoning DHV (Pty) Ltd to undertake a Heritage Impact Assessment (HIA) that forms part of the Basic Environmental Assessment (BA) for the proposed Soufflet Malt new greenfield malt production facility in the Sedibeng District Municipality of Gauteng, in South Africa.

A further standalone Palaeontological Impact Assessment (PIA) was completed for PGS by Dr Elize Butler of Banzai Environmental.

During the fieldwork a total of two heritage resources were identified. Both the old road (**SM01**) and old pipeline (**SM02**) markers were rated as having a Low heritage grading and are not conservation worthy (NCW) as they contain no cultural or scientific value. See the individual site descriptions as contained in **Appendix C**. The field description forms were collected with ArcGIS Survey123 in field software.

The study area currently intersects the 2km buffer of the Provincial Heritage Site of Klip River Quarry, An Acheulean/Middle Stone Age gravel site. Given the area's rich archaeological history (see **Section 4.2**), the possibility for subsurface finds should not be ignored. Therefore, it is the opinion of PGS Heritage that a Chance Finds Procedure should be followed (see **Section 6.2**)

It should be noted that during the fieldwork, in the aforementioned tilled and worked soils (**Figure 18**) of the malt facility floor plan, a single quartzite lithic artefact (flake see **Figure 17**) was seen. Given its density and displaced nature no scientific value can be immediately attached however given that the lithic was seen in the currently protected Provincial Heritage Sites' buffer, astute attention should be given to the Chance Finds Procedure during the construction phase.

Mitigation considerations and buffers to consider from the EIA phase are:

- No heritage resources were located, however, not detracting in any way from the comprehensiveness of the fieldwork undertaken, it is necessary to realise that the heritage resources located during the fieldwork do not necessarily represent all the possible heritage resources present within the area. Various factors account for this, including the subterranean nature of some archaeological sites and existing vegetation cover. It should be noted most of the study area was accessible for the fieldwork survey, but the vegetation is thick bush and visibility of sites such as Stone Age or Iron Age are difficult to locate.
- During the construction phase, it is important to recognize any significant material being unearthed, making the correct judgment on which actions should be taken. It is recommended that the following chance find procedure should be implemented.

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page 35

- A heritage practitioner / archaeologist should be appointed to develop a heritage induction program and conduct training for the ECO as well as team leaders in the identification of heritage resources and artefacts **during the implementation of the EMPr.**
- An appropriately qualified heritage practitioner / archaeologist must be identified to be called upon in the event that any possible heritage resources or artefacts are identified.
- Should an archaeological site or cultural material be discovered during construction (or operation), the area should be demarcated, and construction activities halted.
- The qualified heritage practitioner / archaeologist will then need to come out to the site and evaluate the extent and importance of the heritage resources and make the necessary recommendations for mitigating the find and the impact on the heritage resource.
- The contractor therefore should have some sort of contingency plan so that operations could move elsewhere temporarily while the materials and data are recovered.

7.1 Mitigation measures

Mitigation measures are described in **Table 8** of this report.

7.2 General

It is the combined considered opinion of the heritage specialists that the proposed project will have no direct impact on the identified heritage resources rated being of low heritage significance.

With the implementation of recommended mitigation measures the overall impact on heritage resources will be reduced to acceptable levels during the activities of the project.

PGS Heritage sees no way in which construction, in its whole extent, should be halted from a heritage position.

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page 36

8 REFERENCES

8.1 Published References

- BERGH, I.S. (ed.). 1999. Geskiedenisatlas van Suid-Afrika. Die vier noordelike provinsies. Pretoria: J.L. van Schaik.
- BREUIL, A.H., 1943. An industry with clacto-Abbeyillian facies fro the 50-foot terrace of the Vaal at Vereeniging. *South African Journal of Science*, 40(11), pp.282-284.
- HALL, S. 2007. Tswana History in the Bankenveld in Bonner, P et al A Search for Origins: Science, History and South Africa's 'Cradle of Humankind'. Wits University Press, Johannesburg.
- HUFFMAN, T.N. 2007. Handbook to the Iron Age: The archaeology of Pre-Colonial Farming Societies in Southern Africa. University of KwaZulu-Natal Press, Scottsville.
- KOVACS I. 1998. Redan Petroglyphs In *The Digging Stick* Volume15, NO.3 November 1998
- KUMAN, K. 2007. The Earlier Stone Age in South Africa, site context, and the influence of cave studies. In Pickering, T.R., Schick, K. & Toth, N. (eds) *African Taphonomy: A Tribute to C.K. "Bob" Brain*. Indiana: Stone Age Institute Press.
- LEIGH, R.L. 1968. Vereeniging. Courier-Gazette Publishers (Pty) Ltd, Johannesburg.
- LE ROUX, S.G. and LE ROUX, S.F., 1959. A New South African Chelles-Acheul Site near Vereeniging. *The South African Archaeological Bulletin*, pp.138-141.
- MASON, R.J., 1962. The Earlier Stone Age and the Transvaal. *The South African Archaeological Bulletin*, 17(65), pp.46-50.
- OBERHOLSTER, J.J. 1972. The Historical Monuments of South Africa. The Rembrandt van Rijn Foundation for Culture, Stellenbosch
- MUCINA, L. and RUTHERFORD, M.C., 2006. *The vegetation of South Africa, Lesotho and Swaziland* (pp. viii+-807).
- PRINS, M. 2005. The Primordial Circle - The Prehistoric Rock Engravings Of Redan, Vereeniging. Thesis submitted for the degree Philosophiae Doctor in the subject group History, School of Basic Sciences, Vaal Triangle Faculty, North-West University.
- PRINS, M., 2007. From apathy to oblivion? The shameful history of heritage resource management in the Vaal Triangle. *TD: The Journal for Transdisciplinary Research in Southern Africa*, 3(1), pp.39-52.
- VAN RIET LOWE, C. 1937. The Archaeology of the Vaal River Basin. *Geol. Mem.* 35, pp. 69-78.
- VAN RIET LOWE, C. 1952. The Development of the Hand-Axe Culture in South Africa. Proc. First. Pan-Afr. Congress on Prehistory, Nairobi, 1947. Oxford (Blackwell), p. 172.
- VAN RIET LOWE, C., AND VAN DER ELST, W. 1949. Two New Chelles-Acheul or Stellenbosch Stage I sites. *S.Afr. Archaeol. Bull.*, 16, pp. 43-50.
- WADLEY, L .2013. Recognizing Complex Cognition through Innovative Technology in Stone Age and Palaeolithic Sites. *Cambridge Archaeological Journal*, 23, pp 163-183 doi:10.1017/S0959774313000309

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page 37

8.2 Unpublished References

- BIRKHOLTZ, PD. 2009. Heritage Impact Assessment: Proposed Mamello Extension 1 (Portion Of The Remainder Of Farm Vaalview 486 Ir) And Mamello Extension 2 (Portion 400 Of The Farm KoppieKFontein 478 Ir) Developments, Sedibeng District Municipality, Gauteng Province
- BIRKHOLTZ, PD. 2012. Heritage Scoping Assessment - Old Vereeniging Hospital: Proposed Development of the Property containing the Old Vereeniging Hospital, Emfuleni Local Municipality, Sedibeng District Municipality, Gauteng Province.
- COETZEE, FP. 2008. Cultural Heritage Survey of the Proposed Development of Portion 53 of the Farm Kookfontein 545-IQ, Rothdene, Midvaal Local Municipality. For Triviron EAP.
- FOURIE, W. 2008. Archaeological Impact Assessments within South African Legislation. South African Archaeological Bulletin 63 (187): 77–85, 2008.
- FOURIE, W. 2017. Finding on Possible Exemption from a Heritage Impact Study: Mixed Use Development on Portion 81 of the Farm Rietfontein 364IQ, Meyerton, Gauteng Province.
- FOURIE, W. 2017. Archaeological Impact Assessment for Meyerton Mall and Residential Development on Portion 64 of Portion 81 of the Farm Rietfontein 364IQ, Meyerton, Gauteng, Province.
- FOURIE, W. 2019. Request for Exemption From a Heritage Impact Study: Solink Power Procurement (Pty) Ltd (Solink) - Development of a Small-Scale Solar Photovoltaic (Pv) Facility to Supplement Processing Power Requirements for The Adjacent Heineken Sedibeng Brewery, Located Within Sedibeng in the Gauteng Province.
- HOLLMANN, J. 2020. Archaeological Impact Assessment Report on the Redan Engraving Site: Springfield Coal Mining Project Situated Between Vereeniging and Meyerton, In the Sedibeng District Municipality, Gauteng Province.
- HUFFMAN, T. N. 2008. Mountain View Heritage Assessment, Gauteng. Unpublished Phase I Archaeological Impact Assessment. Obtained on 10th May, 2017. URL: <http://www.sahra.org.za/sahris/heritage-reports/aiamountainviewhuffmantnmay08>.
- KÜSEL, U. 2014. Proposed Design & Construction of K77 between Elizabeth Rd and K154, Midvaal, Gauteng
- PISTORIUS, JJ. 2007. A Phase I Heritage Impact Assessment Study for Water and Sewage Pipeline Corridors near Vanderbijlpark in the Gauteng Province of South Africa.
- PELSER A.J. & VAN VOLLENHOVEN A.C. 2009. A Report on a Heritage Impact Assessment Study for the Powerline from Glockner-Kookfontein Substations Vereeniging, Gauteng. For: Baagi Environmental Consultancy CC.

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page 38

PELSER A.J. 2011. A Report on a Heritage Walkdown Study for the Proposed New 275kv Powerline between the Glockner-Kookfontein Substations Vereeniging, Gauteng. For: Baagi Environmental Consultancy CC..

PELSER A.J. 2013. Basic Assessment Report for a Waste Management License Application, DMS Powders, Meyerton Portions 4 & 63 of Kookfontein 545IQ, Gauteng. For: Shangoni Management Services (Pty) Ltd.

SELIANE, M. 2013. KaNgwane South Anthracite Mine: Heritage Impact Assessment.

VAN DER WALT, J. 2021. Heritage Impact Assessment for The Proposed Rietspruit Township Development on Portion 8 of the Farm Rietspruit 152-Ir, Within the Jurisdiction Of Midvaal Local Municipality, Gauteng Province

VAN SCHALKWYK, J. 2013. Heritage Impact Assessment for the Proposed Construction of Eskom Five (5) 88kv Powerlines Connecting Kookfontein and Jaguar Substations, Midvaal and Emfuleni Municipalities, Gauteng Province.

8.3 Internet References

www.sahistory.co.za

8.4 Google Earth

All the aerial depictions and overlays used in this report are from Google Earth.

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page 0

APPENDIX A
ENVIRONMENTAL IMPACT METHODOLOGY

Royal HaskoningDHV: IMPACT ASSESSMENT METHODOLOGY

1. Impact Rating Methodology:

The potential environmental impacts associated with the project will be evaluated according to its nature, extent, duration, intensity, probability and significance of the impacts, whereby:

- Nature: A brief written statement of the environmental aspect being impacted upon by a particular action or activity;
- Extent: The area over which the impact will be expressed. Typically, the severity and significance of an impact have different scales. This is often useful during the detailed assessment phase of a project in terms of further defining the determined significance or intensity of an impact. For example, high at a local scale, but low at a regional scale;
- Duration: Indicates what the lifetime of the impact will be;
- Intensity: Describes whether an impact is destructive or benign;
- Probability: Describes the likelihood of an impact actually occurring; and
- Cumulative: In relation to an activity, means the impact of an activity that in itself may not be significant but may become significant when added to the existing and potential impacts eventuating from similar or diverse activities or undertakings in the area.

This approach incorporates two aspects for assessing the potential significance of impacts, namely occurrence and severity, which are further sub-divided as follows:

Occurrence		Severity	
Probability of occurrence	Duration of occurrence	Scale/extent of impact	Magnitude (severity) of impact

To assess each of these factors for each impact, the following four ranking scales are used:

1.1 Criteria for the Ranking of Impacts

Probability	Duration
5 - Definite/ don't know	5 - Permanent
4 - Highly probable	4 - Long-term
3 - Medium probability	3 - Medium-term (8 - 15 years)
2 - Low probability	2 - Short-term (0 - 7 years) (impact ceases after the operational life of the activity)
1 - Improbable	1 - Immediate
0 - None	0 - None
Scale	Magnitude
5 - International	10 - Very high/ don't know
4 - National	8 - High
3 - Regional	6 - Moderate
2 - Local	4 - Low
1 - Site only	2 - Minor
0 - None	0 - None

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page 1

Once these factors have been ranked for each impact, the significance of the two aspects, occurrence and severity, must be assessed using the following formula:

$$SP \text{ (significance points)} = (\text{magnitude} + \text{duration} + \text{scale}) \times \text{probability}$$

The maximum value is 100 significance points (SP). The impact significance is then rated as follows:

1.2 Impact significance:

SP >75	Indicates high environmental significance	An impact which could influence the decision about whether or not to proceed with the project regardless of any possible mitigation.
SP 30 – 75	Indicates moderate Environmental significance	An impact or benefit which is sufficiently important to require management and which could have an influence on the decision unless it is mitigated.
SP <30	Indicates low environmental significance	Impacts with little real effect and which should not have an influence on or require modification of the project design.
+	Positive impact	An impact that constitutes an improvement over pre-project conditions

Impacts must be assessed and rated before and after mitigation.

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page 2

APPENDIX B
SITE DESCRIPTION FORMS

Site coordinates		
site_nr	X	Y
SM01	-26.45237	28.07528
SM02	-26.45211	28.07341

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page 3

Site Number	X	Y	Brief Site Description	Significance	Heritage Rating
SM01	-26.45237	28.07528	Two old road markers.	-	NCW



Figure 19 - Old road marker.



Figure 20 - The opposite road marker.

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page 0

Site Number	X	Y	Brief Site Description	Significance	Heritage Rating
SM02	-26.45211	28.07341	Old pipeline marker.	-	NCW



Figure 21 - Old pipeline marker.



Figure 22 - Another view of the pipeline marker.



Figure 23 - Concrete found near marker.

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page 0

APPENDIX C
PGS TEAM CVS

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page 1



DANIEL TASKER

Professional Archaeologist

PROFILE

Junior Archeologist- holds a Masters degree in Archaeology specialising in the Early Stone Age and is registered with the Association of Southern African Professional Archaeologists as a Professional Archaeologist.

My work focuses on the process of heritage management through Heritage Impact Assessments, mitigation projects and artefact analysis. I currently work all over South Africa on numerous projects.

CONTACT

PHONE NUMBER:
[REDACTED]

WEBSITE:
www.pgsheritage.com

EMAIL ADDRESS:
[REDACTED].za



EDUCATION

University of the Witwatersrand

2014 - 2016

BA Degree - Majors in Archaeology and Geography

University of the Witwatersrand

2017

BSc Hon Archaeology, with GIS.

University of the Witwatersrand

2018 - 2020

MSc by research in Archaeology, specialising in the Early Stone Age. (Golden Key member)

WORK EXPERIENCE

PGS Heritage -

Junior Archaeologist

2023- present

I am responsible for conducting heritage and archaeological impact studies, material analysis and archaeological excavations.

The University of the Witwatersrand, Origins Centre - Museum Tour Guide

2016 - 2019

Tour guiding of the human origins across Africa.

PROFESSIONAL AFFILIATION

Accredited Professional Archaeologist

Association of Southern African Professional Archaeologists -
Since 2018

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page 2



WOUTER FOURIE

Professional Heritage Practitioner

PROFILE

Project Manager and Principal Heritage Specialist holds a post-graduate degree in Archaeology and is registered with the Association of Southern African Professional Archaeologists as a Professional Archaeologist and is accredited as a Principal Investigator; he is further an Accredited Professional Heritage Practitioner with the Association of Professional Heritage Practitioners in South Africa.

My work focuses on heritage management through Heritage Impact Assessments, implementation of recommendations and large-scale heritage mitigation projects. I have worked, completed and implemented heritage projects in South Africa, Botswana, Mozambique, Mauritius, Zambia, Lesotho, and the Democratic Republic of the Congo.

CONTACT

PHONE NUMBER:

████████████████████
████████████████████

WEBSITE:

www.pgsheritage.com

EMAIL ADDRESS:

████████████████████@m



EDUCATION

University of Pretoria

1993-1996

BA Degree - Majors in Archaeology, Anthropology and Geography

University of Pretoria

1997

BA Hon Archaeology, with further specialisation in environmental management.

University of Cape Town

2016 - present

MPhil Conservation of the Built Environment

WORK EXPERIENCE

PGS Heritage Group of Companies

(South Africa, Lesotho, Mozambique, and Portugal)

Director – Heritage Specialist

2003- present

I am actively involved in the management of the business and focus on marketing and new business for PGS, specifically the broader SADC region. Acting as heritage specialist in multidisciplinary teams

The University of the Witwatersrand - Project Manager – Archaeological Contracts Unit

2007-2008

Responsible for conducting heritage and archaeological impact studies, archaeological excavations and general management of the unit

Matakoma Consultants – Director – Heritage Specialist

2000 – 2008

Heritage specialist and Director responsible for heritage and archaeological impact studies

Randfontein Estate Gold Mine – Environmental Coordinator

Oct 1998- Feb 2000

Coordinating all environmental Rehabilitation work

Department of Minerals and Energy Environmental Officer

Oct 1997 – Sept 1998

PROFESSIONAL AFFILIATION

Accredited Professional Heritage Practitioner

Association of Professional Heritage Practitioners

Since 2014

Accredited Professional Archaeologist

Association of Southern African Professional Archaeologists –

Since 2001

Document	Project	Revision	Date	Page Number
803HIA-001	Soufflet Malt Production Facility	1.0	11/06/2024	Page 3



JESSICA ANGEL

Professional Heritage Practitioner

PROFILE

Senior Heritage Specialist with an MSc degree in Archaeology and Geography. I am accredited as a Professional Archaeologist by the Association of Southern African Professional Archaeologists and as a Field Supervisor for Colonial Period, Iron Age, and Stone Age archaeology. My primary focus is on heritage management, which includes conducting Heritage Impact Assessments, managing heritage mitigation, and overseeing lab operations.

I have successfully managed various aspects of large-scale mitigation projects in South Africa and Lesotho. My responsibilities included conducting archaeological research, documentation, GIS, artefact photography, and archaeological illustration. I also managed archaeological assemblage storage and curation, as well as specialist analysis.

CONTACT

PHONE NUMBER:
[REDACTED]

WEBSITE:
www.pgsheritage.com

EMAIL ADDRESS:
[REDACTED]



EDUCATION

University of the Witwatersrand
2003-2005
BA Degree - Majors in Archaeology and Geography

University of the Witwatersrand
2006
BSc Hon Geography, with further specialisation in Environmental Management, Advanced GIS, Palaeogeomorphology and Globalisation and Agro Food restructuring.

University of the Witwatersrand
2010 - 2013
MSc Archaeology and Geography

WORK EXPERIENCE

PGS Heritage – Heritage Specialist/Senior Archaeologist
2023- present
Working in the Heritage Unit, managing Heritage Impact Assessments. Training of interns and Junior archaeologists

PGS Heritage, Lesotho– Senior Archaeologist
2018-2023
Laboratory and collections manager for the Heritage Mitigation of Polihali Dam Project. The Polihali Dam Project was a 2nd Phase CRM operation to mitigate the total inundation of various cultural sites.

PGS Heritage – Junior Archaeologist
2015-2018
Heritage Impact Assessments, Second Phase Heritage Mitigation on the Raising of the Clarwilliam Dam Wall.

PGS Heritage – Internship
2012 – 2014
My duties included gaining familiarity with gathering relevant background data, field surveys, exhumations, and report writing.

NGT Projects and Heritage Consultants
2013
Heritage Impact Assessments - Background research, report writing and ground surveys

Department of Geography, Archaeology and Environmental Science (University of the Witwatersrand)
2011
Research Assistant

PROFESSIONAL AFFILIATION

Accredited Professional Archaeologist
Association of Southern African Professional Archaeologists (ASAPA)– Since 2015