

Phase I Heritage Assessment of P22071 SANRAL Worcester to Glen Heatlie Project

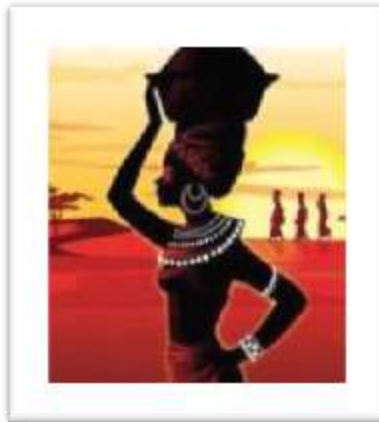
Province: Western Cape

District Municipality: The Cape Winelands District Municipality

Local Municipality: Breede Valley Local Municipality

Implementing Agent: Delta Built Environment Consultants

For: Delta Built Environment Consultants



Ancient Places Pty. Heritage Consultancy

Sian Hall (BA Hons. Anthropology)

37a Buchanan Street

Howick

3290

Cell: 083 395 2651

Email: ancient.places.africa@gmsil.com

cultural.solutions.africa@gmail.com

Including Palaeontology and Built Heritage Reports

Contents

List of Abbreviations and Acronyms	4
Details of Specialists.....	4
Brief Résumé of Consultants.....	5
Sian Hall.....	5
Declaration of Consultants Independence	6
Executive Summary.....	7
1. Limitations to the Study.....	9
2. Background Information to the Project.....	9
2.1. Background Information Introduction.....	9
2.2. Scope of Works	10
2.2.1. Option 1	12
2.2.2. Option 2	14
2.2.3. Option 3	16
2.3. Social Purpose of the Proposed Development	19
2.4. Specialist Engagement	20
2.5. Table of Background Information	21
3. Terms of Reference.....	21
4. Legislation Behind the Terms of Reference	22
Under Definitions in the NHRA, the word:	27
5. Requirements of a Heritage Impact Assessment Phase 1	28
6. Location of the Study Area and Footprint	29
7. History of the Area.....	36
7.1. Prehistory of the Breede River Valley Region	37
7.2. History of the Breede River Valley	38
7.3. A Brief History of Worcester	41
8. Character and Sense of Place of the Breede River Valley.....	42
9. Background Information of the Survey.....	44
9.1. Methodology.....	44
9.1.1. Desktop Study	44
9.1.2. Guidance from the Desktop Study.....	45

9.1.3.	Site Visit.....	46
9.1.4.	Stakeholder Consultation.....	46
9.1.5.	Photographs	47
9.1.6.	Restrictions Encountered During the Survey	47
10.	Assessment of Significance and Value of the Study Area and Footprint.....	47
10.1.	Locational Data	48
10.2.	Description of the General Area Surveyed	48
10.3.	Topography	48
11.	Heritage Markers on the Study Footprint and on the Surrounding Area	50
11.1.	Early and Middle Stones Ages.....	50
11.2.	Late Stone Age in the General Area	64
11.3.	Settler and Colonial History	68
11.3.1.	Twefontein Padstal	68
11.3.2.	Cluster of Corrugated Iron Houses.....	86
11.3.3.	Uitvlught Guest House, Worcester	95
11.4.	Cultural Landscape, Living Landscape, and Scenic Beauty	96
11.5.	Graves	99
12.	Palaeontological Analysis.....	100
13.	Field Gradings of Observed Heritage Resources During the Field Survey	102
14.	The National Heritage Resources Act as applicable to Heritage Features identified on the Study Footprints.....	105
15.	Conclusions and Recommendations	109
15.1.	Conflicts.....	109
15.1.1.	Options 1 and 2	109
15.1.2.	Option 3	113
15.1.3.	Summary of Conflicts	116
16.	Recommendations	117
17.	Thanks	119
18.	References	119
	Acts.....	120
	Appendix 1. Relocation of Graves.....	121

Appendix 2: Protocol for the Identification, Protection, and Recovery of Heritage Resources	123
Appendix 3: Palaeontology Chance Find Protocol	124

List of Abbreviations and Acronyms

ACRM	Archaeological and Cultural Resource Management
CLO	Community Liaison Officer
CPA	Cape Provincial Administration
ELO	Environmental Liaison Officer
ESA	Early Stone Age
HIA	Heritage Impact Assessment
Historic Period	Since the arrival of White Settlers – c. AD 1820, in this part of the country.
HWC	Heritage Western Cape
LSA	Later Stone Age
MSA	Middle Stone Age
NHRA	National Heritage Resources Act, 1999 (Act No. 25 of 1999) and associated regulations (2000)
SAHRA	South African Heritage Resources Agency
SAHRIS	South African Heritage Resources Information System
SANRAL	South African National Roads Agency Ltd.
Stone Age	Early Stone Age 2 000 000 - 250 000 BP Middle Stone Age 250 000 - 25 000 BP Late Stone Age 30 000 - until c. AD 200

Details of Specialists

Consultant: Sian Hall: Ancient Places Pty. Ltd.

Contact person: Sian Hall

Postal address: 37a Buchanan Street, Howick, 3290, KZN

Mobile: +27 083 395 2651

Email: cultural.solutions.africa@gmail.com
ancient.places.heritage@gmail.com

Brief Résumé of Consultants

Sian Hall

Sian Hall is trained as a Social and Cultural Anthropologist, but with a strong Archaeological component throughout her Undergraduate and Honour's coursework. This includes Physical Anthropology/Early Man Studies; Rock Art; a mini-thesis comprising of an archaeological dig and analysis of the resulting Late Stone Age Archaeology from the Bavianskloof, Eastern Cape; and an Honour's Thesis comprising of Historical-, and Ethno-archaeology, and symbolic usage of space of a historical Methodist Mission Station in the Eastern Cape, and a modern Mfengu community in the Ciskei. Sian Hall also spent two years working towards a Master's Degree in the Department of Archaeology, Cape Town. During this period she completed a number of seasons digging at Dune Fields Archaeological site at Eland's Bay, Western Cape, and conducting an extensive Ethno-archaeological and Anthropological study among shell fish collectors at Eland's Bay.

During the years of 1991 to 1993 Sian researched the Iron Age cities of the Venda petty royalty along the northern slopes of the Soutpansberg Mountains. Here she mapped certain of these extensive Iron Age cities, and pieced together their history through the collecting of oral history from the Tshivula group of people to whom these cities had belonged.

Sian has also extensively researched the Bantu-speaking rock art of the Soutpansberg Mountains area, and this led to a co-authored academic publication on the Bantu-speaking rock art of southern and Central Africa.

Sian's greatest interest lies in the history and status of the indigenous domestic dogs of Africa, which she has researched, and spoken and published on, for a number of decades. Her book, *The Dogs of Africa*, forms the definitive work of the dog in Africa. This was published by Alpine Publishers, in the USA.

Sian is the author of a numerous of books, novels and articles, both academic and for the public. A number of these publications include subject matter relating to ethnography, archaeology, history and anthropology.

More recently, over the last seven years (Covid intervening) Sian Hall has been working towards a Master of Philosopher Degree in “Conservation of the Built Environment”, in the Architecture Department, University of Cape Town. During the course of this degree, it has been necessary to compile a number of reports analysing various historic buildings and cultural landscapes, and development initiatives. The methods and theory presented in this course has been implemented in the investigation and analyses of this report.

Sian has published a book through Lambert Press (9th January, 2018) on the remarkable renovation of the Old Church at Centocow Mission Station, KwaZulu-Natal, conducted by the architect, Robert Brusse. This book is entitled *Restoration of the Old Church, Centocow Mission Station*.

Sian has also published a novel, *The Anthropologist, the Waterfall, and the Very Worried Sangoma*, set in Howick and the Drakensberg area of KZN (Reach publishers, 2021); and a cynological book on the Rhodesian Ridgeback dog breed, *The Influence of the Bull Terrier in the Rhodesian Ridgeback Breed* (Reach Publishers, March 2022).

Sian’s other books, based upon southern African oral history, include: Sian Hall and Rob Marsh, *Beyond Belief: Murders and mysteries of Southern Africa* (Struik Publishers, January 1st, 1996) (oral history); *Haunted: Ghosts and Spirits of Southern Africa* (1st January, 2011) (oral history); and the cynological analysis which forms the definitive study of the dog breeds of Africa, *Dogs of Africa* (1st February, 2003). This book is now regarded as a rare book, and as “Africana”.

Sian Hall’s books are kept in special sections in various major University Libraries within South Africa.

Declaration of Consultants Independence

Sian Hall is an independent consultant to **Delta Built Heritage Consultants**, and has no business, financial, personal or other interest in the activity, application or appeal in respect of which she was appointed, other than fair remuneration for work performed in connection with the activity, application or appeal. There are no circumstances whatsoever that compromise the objectivity of this specialist performing such work.



Executive Summary

This report concerns the First Phase Heritage Impact Assessment survey of the proposed **capacity improvement of National Route 1 Section 3 from Worcester East (km 3.50) to Glen Heatlie (km 14.00)**. This project lies within the **Breede Valley Local Municipality**, and the **Cape Winelands District Municipality**.

This is a **South African National Roads Agency SOC Limited (SANRAL)** project, and is being implemented by EFG Engineers.

This general region is known to have various heritage features from a number of different periods of the country's prehistory, and history. These include:

- Early Stone Age (mostly unprovenanced scatters in the Worcester area);
- Middle Stone Age (mostly unprovenanced scatters in the Worcester area);
- Late Stone Age (the period usually associated with the San hunter-gatherers, and Khoekoen Herders. Late Stone Age is less prevalent in the area than Early and Middle Stone Age artefacts);
- San Rock Art (this is not abundant, but present on some hills and mountains);
- Settler History;
- Colonial History;
- Cultural Landscapes (Cape Winelands);
- Living Landscapes (Cape Winelands and historically-based farming community; a small historical city – one of the oldest in South Africa);
- Graves from essentially the Historical Period, to the present.

Certain heritage features were discovered during the field survey of the study footprints on the 27th March 2023. These included:

- Tweefontein Padstal. This is a historic (probably 1800's) building, originally a cellar, which is now a modern cultural heritage feature, since it is a shop selling products of a deep cultural nature, and that these stores constitute a typical cultural expression in the Cape Winelands Cultural and Living Landscape;

- A historic irrigation ditch associated with Tweefontein Padstal;
- The space inclusive of these two areas has become a Living Cultural Space;
- Uiltvlug Guest House, which is a Provincial Heritage Site;
- An Early Stone Age cobble stone terrace, which is likely to be out-of-context, but which, nevertheless has abundant lithic expressions of Early Stone Age industrial artefacts;
- A cluster of six houses, of uncertain date, but some of which may possibly be constructed from historic corrugated sheeting. In addition, they are of high social concern since they are all inhabited, and it is possible that the inhabitants may form part of an extended family, or of an inter-dependent community.
- The area forms part of a Historic, Cultural and Living Landscape.

These heritage and cultural occurrences trigger certain sections and clauses / regulations of the South African National Heritage Resources Act, No. 5 of 1999.

As a result these factors indicate that (at the very least) some additional measures must be taken while conducting certain aspects of this project. This will be discussed in this report.

It is understood from the Environmental Agency that a degree of community objection exists in relation to the proposed project.

The study footprint lies within zones of varied palaeontological significance, consisting of both green and blue zones. The area lying within a green zone is of moderate significance for the presence of palaeontological fossils. As such, it requires a further Desktop Assessment by a registered palaeontologist

Three options exist for this proposed development. Options 1 and 2 (combined) will impact negatively on all of the heritage features identified in this report. Option 3 only impacts negatively on the Cultural Landscape of this area.

If Options 1 and 2 are implemented then this report suggests that a further Phase 2 CULTURAL IMPACT ASSESSMENT and a further Phase 2 BUILT HERITAGE IMPACT ASSESSMENT be conducted before this proposed development may be implemented.

At all times, extreme caution must be extended by the developers to ensure that no significant and / or protected past, or present, archaeological, or cultural material is disturbed in any way.

Attention is drawn to the South African National Heritage Resources Act, 1999 (Act No. 25 of 1999), which, requires that operations that expose archaeological or historical remains, fossils, or other potential grave sites, should cease immediately, pending evaluation by the provincial heritage resources authority.

1. Limitations to the Study

Conditions at the time of the field study were hot and sunny, with clear skies. The only limitations to the study was the malfunction of a Garmin Etrex 32X, which resulted in the inability to log the track followed during the field survey.

The author was unable to open the document relating to Uitvlucht Guest House on the SAHRIS website. It is, however, a Provincial Heritage Site, and therefore afforded a Grade 2. It is Formally Protected. All other heritage features identified in this report are afforded General Protections.

2. Background Information to the Project

2.1. Background Information Introduction

This report concerns the First Phase Heritage Impact Assessment survey of the proposed **capacity improvement of National Route 1 Section 3 from Worcester East (km 3.50) to Glen Heatlie (kilometre 14.00)**. This project lies within the **Breede Valley Local Municipality**, and the **Cape Winelands District Municipality**.

Delta Built Environment Consultants (Delta BEC) has been appointed by **EFG Engineers** on behalf of the **South African National Roads Agency SOC Limited (SANRAL)** for the environmental sub-services for the capacity improvement of National Route 1 Section 3 from Worcester East (kilometer 3.50) to Glen Heatlie (kilometer 14.00).

The capacity improvement of the National Route will consist of two 3.7 meter lanes, and 2.5 meter shoulders, and will provide a full freeway cross-section for the full length of the upgrade. (Delta BEC, BID Document January 2023).

The existing road was built at some point during the 1950s or early 1960s by the Cape Provincial Administration (CPA). It was upgraded around 1985 whilst falling under the CPA. It was then redeclared a National Route and incorporated into the SANRAL National Roads network in 1992. It has been subject to limited periodic maintenance over the past 30 years, most recently in 2018 in the form of a mill and replacement of the bitumen treated base and surfacing between km 12.0 and 14.0 (ibid).

The project is situated within the Breede Valley Local Municipality, and in the Cape Winelands District Municipality, on a 10.5 kilometer long portion of the existing National Route 1 that provides national mobility between the Western Cape and Gauteng together with local mobility between Worcester and De Doorns as well as the Karoo (ibid).

The project starts at the eastern edge of the town of Worcester (33° 37' 31.48" S 19° 28' 7.85" E).

The Phase I Heritage Impact Assessment and Palaeontological Assessment will be conducted as per the requirements of Section 38 of the National Heritage Resources Act (Act 25 of 1999).

2.2. Scope of Works

The project proposes to create a dual carriageway which will necessitate the expansion and re-alignment of the already existing road. It will also entail the construction of new service roads. The existing road will also have to be upgraded to a freeway standard with a 120 kilometer per hour design speed (Delta BEC, BID Document January 2023).

The capacity improvement of the National Route will consist of two 3.7 meter lanes, and 2.5 meter shoulders, and will provide a full freeway cross-section for the full length of the upgrade. This linear project will be 10.5 kilometers in length. The project will start at the eastern edge of the town of Worcester (33° 37' 31.48" S 19° 28' 7.85" E) (ibid).

Having considered what the impact of the proposed project would be on existing properties lying to the outside of the current road reserve, it has been decided that a new cross-section of the proposed project should have a minimum road reserve of 50 meters. Any new service roads would typically require a road reserve of between 25 to 30 meters. The current road reserve is approximately 30 meters, with a carriageway width of 11.4 meters. In order to construct the proposed freeway and service road cross-sections, land acquisition would have to take place (ibid).

Where the proposed route alignment is planned to follow the existing alignment it is intended that the new route will utilize as much as possible of the existing road alignment and reserve. This will not apply where geometric improvements to the existing horizontal and vertical curves will be made to permit a 120 kilometer per hour design speed. In addition, where interchange accesses are planned, there would necessarily be a greater need to acquire a more substantial amount of land (ibid).



Photo 1. Looking eastwards along the N1, at the beginning (south-westerly point) of the proposed linear development, 27th February 2023. The road is very quiet in the morning. Farmlands with indigenous vegetation lie to the west, while to the north, mountains adorn the landscape and skyscape. Photo: Sian Hall.



Photo 2. Seekoeigat Padstal, 2 kilometers from the end point (most northerly point) of the proposed linear development. Photo: Sian Hall.

Three alternative routes have been offered for the proposed creation of a dual carriageway. They are as follows:

2.2.1. Option 1

Option 1 will largely follow the existing road alignment, except for a short section of re-alignment before KM 7.0. This option will utilise the existing road as one side of the freeway carriageway. New service roads will have to be constructed with this option to accommodate existing accesses. Two split interchanges will also be constructed to accommodate turning movements (ibid).

Option 1A is an alternative to Option 1 from km 6.8 to km 8.2. This will allow for the proposed alignment to remain on the existing road before and after the 90-degree bend at km 7.5. This design will require a 600 meter radius at this location and will result in the new alignment cutting through an existing mountain on the left-hand side requiring extensive blasting and

earthworks. This proposed option would also require a new service road to follow the same alignment (ibid).

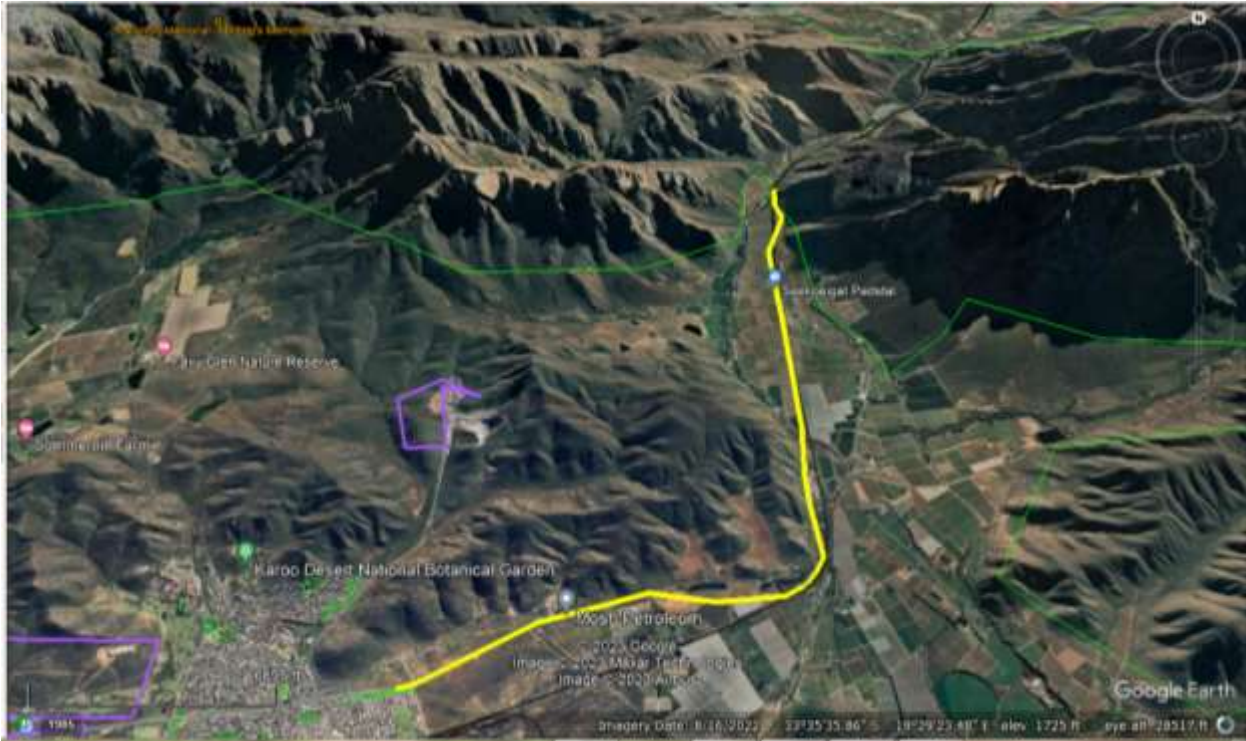


Figure 1. The existing road alignment of 10.14 kilometers length. Google Earth.

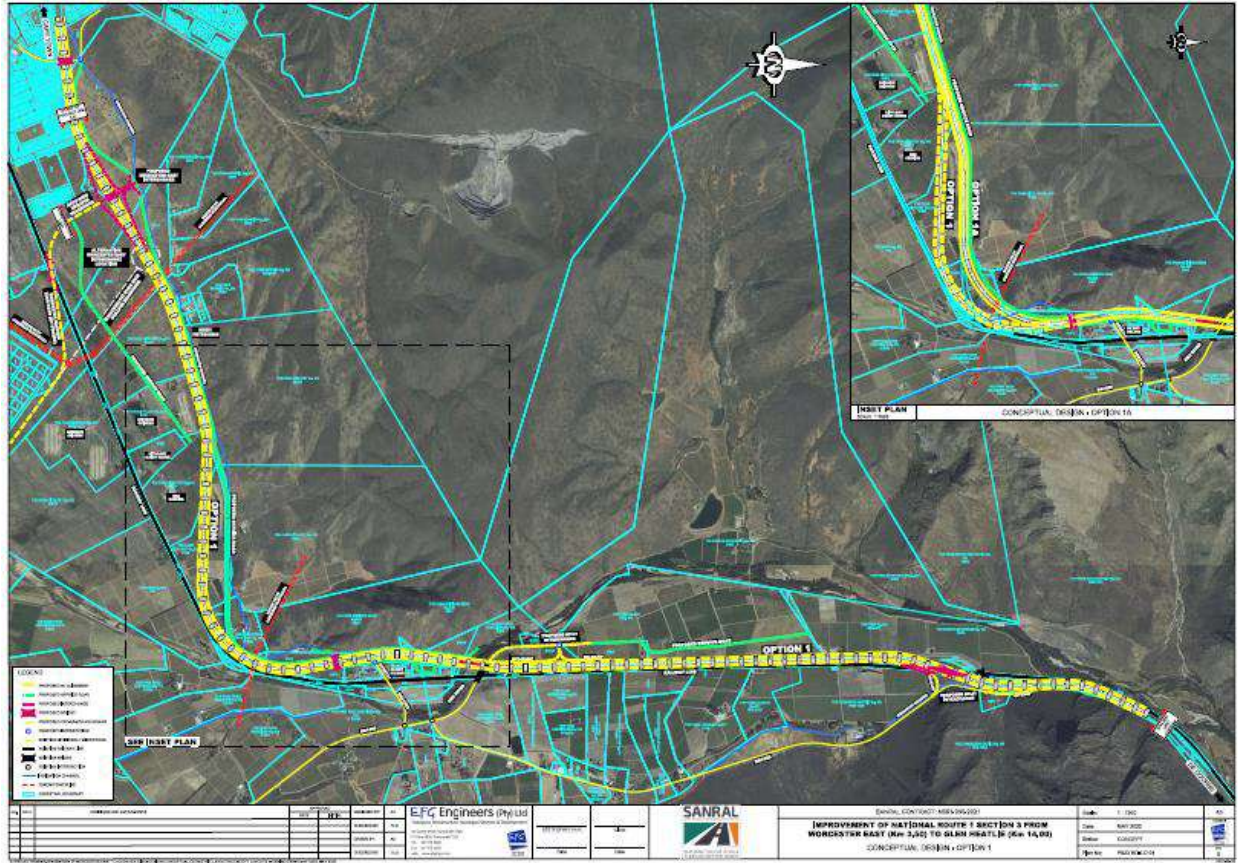


Figure 2. Option 1 and Option 1A. Option 1 will follow the existing road alignment, except for a short alignment at just before kilometer 7. Option 1A focuses on a proposed 90 degree bend at km 7.5. This will require a 60 meter radius which will mean cutting through an existing mountain on the west side of the road. Source: Delta BEC, BID.

2.2.2. Option 2

Option 2 will follow a new alignment through existing farmlands and run parallel to the existing railway up to approximately km 7.0. The existing road will then become a service road. The rest of the alignment will be similar to Option 1, except for the last section of the upgrade where the tie-in with the existing road will take place (ibid).



Figure 3. Option 2. A new alignment will run through existing farmlands, parallel to the existing railway until km 7. In the last section of the road a tie-in with the existing road will take place. Google Earth.

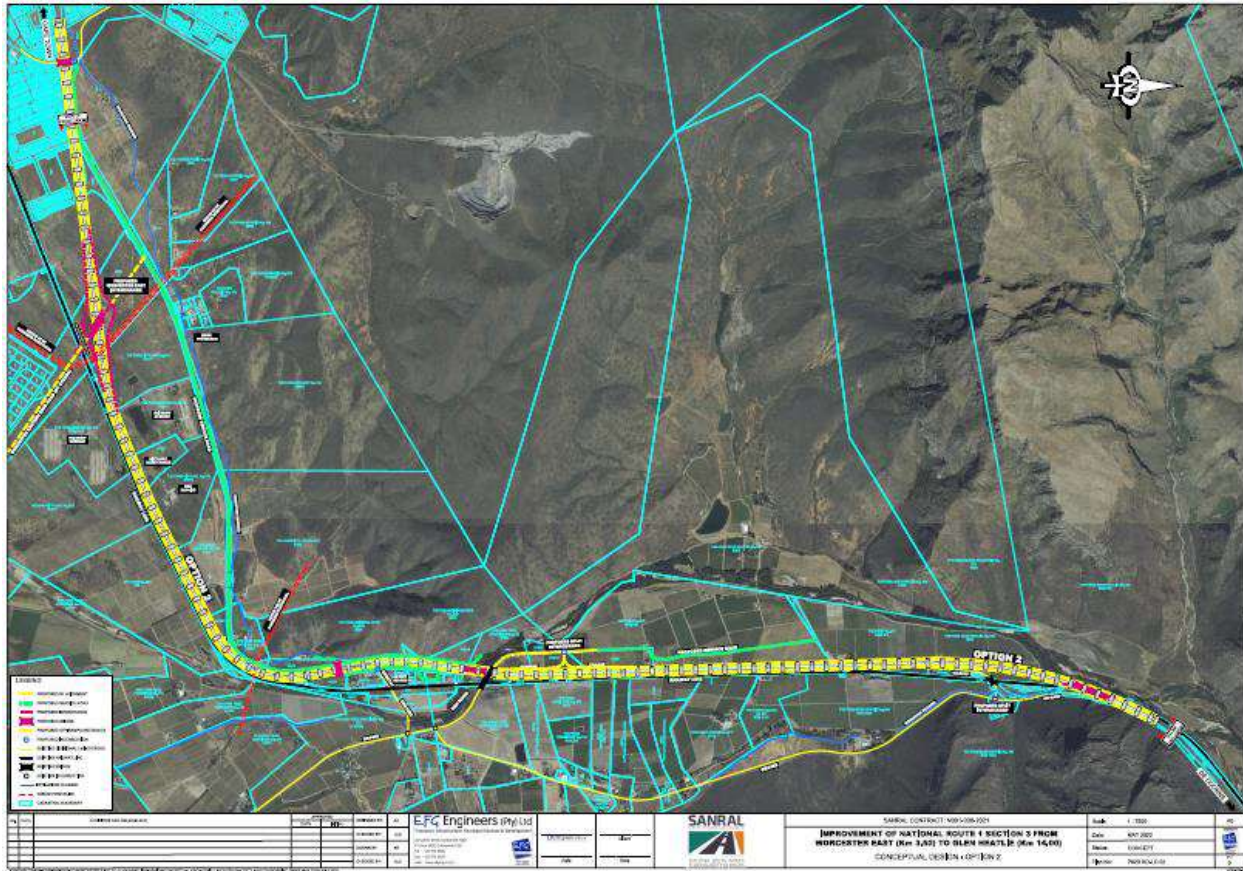


Figure 4. Option 2. Source: Delta BEC, BID.

2.2.3. Option 3

Option 3 will follow the existing road alignment up to km 7.0. From this point, the alignment will follow a new alignment on the right-hand side of the existing railway line. Along the re-aligned section, the existing road will become a service road. A full interchange is also proposed with this option at the De Wet Road Bridge. The main advantage of this option would be the elimination of the road-over-rail crossing at Glen Heatlie.



Figure 5. Option 3. From km 7 the road will deviate to the east side of the existing railway line. A full inter-change is also planned at the De Wet Bridge. Google Earth.

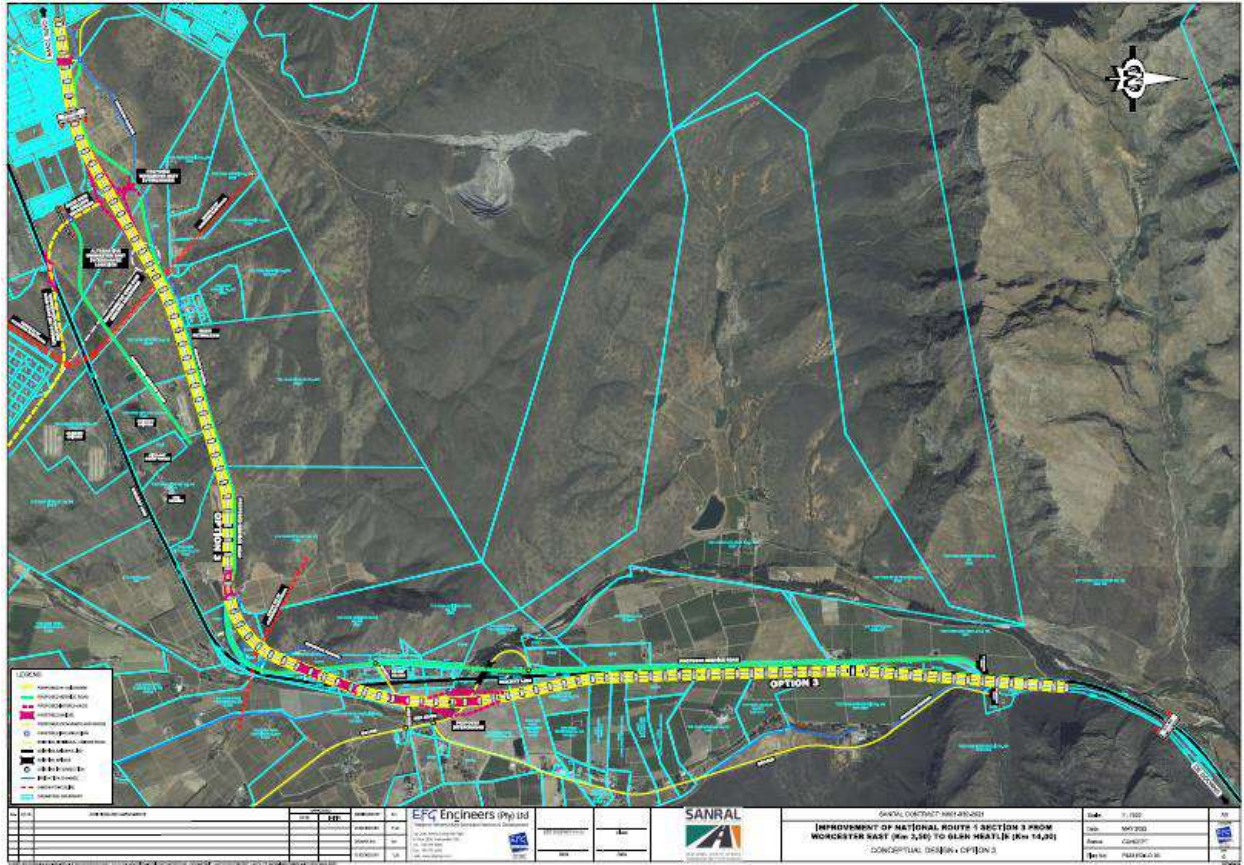


Figure 6. Option 3. Source: Delta BEC, BID.

2.3. Social Purpose of the Proposed Development

A conversation with Neelan Maduray¹, an environmental officer at Delta BEC, revealed that the new proposed upgrade of the road in this project would render this piece of road to be safer than before. It is also very busy at times, and the upgrade is intended to compensate for the high flow of traffic at particular times.



Photo 3. R60 road, 27th February, 2023. Looking southwards. This road leads to an intersection with the N1. The road was quiet of traffic on the day of our field work research. Photo: Sian Hall.

¹ Telephonic conversation, 1st March 2023.



Photo 4. The R60 intersection with the N1 was quiet on the day of the field work research. Photo: Sian Hall.

2.4. Specialist Engagement

Delta Built Environment Consultants have appointed Sian Hall of **Ancient Places Pty.** to compile a First Phase Heritage Impact Assessment satisfying Section 38(8) of the National Heritage Resources Act (NHRA) in conjunction with a Basic Assessment process conducted under the National Environmental Management Act (NEMA) for the proposed development, the **P22071 SANRAL Worcester to Glen Heatlie Project**, which lies within the Worcester area of **the Breede River Local Municipality**, and the **Cape Winelands District Municipality**, in the Western Cape, outlined above. A brief synopsis of the background to this project is provided in Table 1.

This report is intended to inform stakeholders of this project about the Heritage Significances of the proposed development footprint. Stakeholders include **Delta Built Environment Consultants, EFG Engineers, SANRAL, Breede River Local Municipality**, and the **Cape Winelands District Municipality**. It also includes **SAHRA National Heritage Authority**, and of course, the residents themselves.

This Phase I Heritage Impact Assessment is carried out in terms of the National Environmental Management Act (NEMA), 1998 (Act No. 107 of 1998), and designed to meet the requirements of the National Heritage Resources Act (NHRA), 1999 (Act No. 25 of 1999).

2.5. Table of Background Information

TABLE 1. DETAILS OF HIA APPOINTMENT AND DEVELOPMENT

Client Name	Triplo4 Environmental Consultants
Consultants	Sian Hall of Ancient Places Pty. Ltd, for Delta Built Environment Consultants.
Document Title	Phase I Heritage Assessment P22071 SANRAL Worcester to Glen Heatlie Project.
Type of Development	SANRAL has proposed a capacity improvement of National Route 1, Section 3 from Worcester East (km 3.50) to Glen Heatlie (km 14.00). The length of the linear development is 10.5 kilometres.
Rezoning or Sub-division	N/A
Terms of Reference	To carry out a Heritage Impact Assessment (HIA).
Address	The Breede River Local Municipality, KZN.
GPS Co-ordinates	29°12'18.76"S, 29°36'28.29"E
Local Municipality	Breede River Local Municipality.
District Municipality	The Cape Winelands District Municipality.
Legislative Requirements	The Heritage Impact Assessment was carried out in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA), and following the requirements of the National Heritage Resources Act, 1999 (Act No. 25 of 1999) (NHRA).

3. Terms of Reference

A Phase I Basic Heritage Impact Assessment has been advised by SAHRA National Heritage Authority, Western Cape, relating to the proposed development. This development includes both a desktop and field survey of the proposed **P22071 SANRAL Worcester to Glen Heatlie Project**, which lies within the Worcester area of **Breede River Local Municipality**, and the **Cape Winelands District Municipality**, of the Western Cape.

The 10.5 kilometer project proposes to create a dual carriageway which will necessitate the expansion and re-alignment of the already existing road. It will also entail the construction of new service roads, and interchange accesses. The existing road will also have to be upgraded to a freeway standard with a 120 kilometer per hour design speed (Delta BEC, BID Document January 2023).

4. Legislation Behind the Terms of Reference

The National Heritage Resources Act (NHRA) No. 25 of 1999, protects a variety of heritage resources including palaeontological, prehistoric and historical material (including ruins). It protects structures, heritage objects and graves.

Section 33. of the NHRA states that:

- 38.(1) Subject to the provisions of subsections (7), (8) and (9), any person who intends to undertake a development categorised as—*
- (a) **the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;***
 - (b) the construction of a bridge or similar structure exceeding 50 m in length;*
 - (c) **any development or other activity which will change the character of a site—***
 - (i) **exceeding 5 000 m² in extent; or***
 - (ii) involving three or more existing erven or subdivisions thereof; or*
 - (iii) involving three or more erven or divisions thereof which have been consolidated within the past five years; or*
 - (iv) the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;*
 - (d) the re-zoning of a site exceeding 10 000 m² in extent;*

must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development.

Section 38(1)(a) “the construction of a road, wall, powerline, pipeline, canal or other

similar form of linear development or barrier exceeding 300m in length;”
is the primary clause, or legislated heritage trigger, in this proposed project, as is:
Section 38(c)(i):

*any development or other activity which will change the character of a site—
(i) exceeding 5 000 m² in extent;*

in terms of the alteration of the character of the Cultural and Living Landscape, and of such an area more than 500 meters in extent.

The NHRA regulations of 2000 refer for the most part to the processes allowing for permits to be issued for the alteration, destruction or modification of heritage sites and features. These include the following:

- Protected areas
- Burial grounds and graves
- Wrecks
- Exportation of heritage objects
- Reproduction of national heritage sites
- Archaeological and palaeontological sites
- National heritage sites, provincial heritage sites, provisionally protected places, structures older than 60 years

According to Section 3 (2) of the NHRA, the heritage resources of South Africa include:

- “a. places, buildings, structures and equipment of cultural significance;*
- b. places to which oral traditions are attached or which are associated with living heritage;*
- c. historical settlements and townscapes;*
- d. landscapes and natural features of cultural significance;*
- e. geological sites of scientific or cultural importance;*
- f. archaeological and palaeontological sites;*
- g. graves and burial grounds, including.*
ancestral graves;
- ii. royal graves and graves of traditional leaders;*

- iii. graves of victims of conflict;*
- iv. graves of individuals designated by the Minister by notice in the Gazette;*
- v. historical graves and cemeteries; and*
- vi. other human remains which are not covered in terms of the Human Tissue Act, 1983 (Act No. 65 of 1983);*
- h. sites of significance relating to the history of slavery in South Africa;*
- i. movable objects, including objects recovered from the soil or waters of South Africa, including*
 - archaeological and palaeontological objects and material, meteorites and rare geological specimens;*
 - ii. objects to which oral traditions are attached or which are associated with living heritage;*
 - iii. ethnographic art and objects;*
 - iv. military objects;*
 - v. objects of decorative or fine art;*
 - vi. objects of scientific or technological interest; and*
 - vii. books, records, documents, photographic positives and negatives, graphic, film or video material or sound recordings, excluding those that are public records as defined in section 1(xiv) of the National Archives of South Africa Act, 1996 (Act No. 43 of 1996)."*

In terms of section 3 (3) of the NHRA, a place or object is to be considered part of the national estate if it has cultural significance or other special value because of:

"a. its importance in the community, or pattern of South Africa's history;

- b. its possession of uncommon, rare or endangered aspects of South Africa's natural or cultural heritage;*
- c. its potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage;*
- d. its importance in demonstrating the principal characteristics of a particular class of South Africa's natural or cultural places or objects;*
- e. its importance in exhibiting particular aesthetic characteristics valued by a community or cultural group;*
- f. its importance in demonstrating a high degree of creative or technical achievement at a particular period;*
- g. its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons;*
- h. its strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa; and*
- i. sites of significance relating the history of slavery in South Africa.”*

Specific Legislation to this Project

And so the NHRA provides protection to various forms of heritage, including:

- Landscapes -- both cultural and natural (Section 3 (3));
- Buildings or structures older than 60 years (Section 34);
- Archaeological sites, palaeontological material and meteorites (Section 35);
- Burial grounds and graves (Section 36);
- Public monuments and memorials (Section 37);
- Living heritage (defined in the Act as including cultural tradition, oral history, performance, ritual, popular memory, skills and techniques, indigenous

knowledge systems and the holistic approach to nature, society and social relationships) (Section 2 (d) (xxi)).

Cultural Landscapes, or landscapes embodying cultural significance are afforded protection under Section 38 (1) (c) (i) of the NHRA, in which the affected property requires heritage assessment based on its size of greater than 5000 m².

To be specific regarding protections applicable to heritage features that are likely to be present on the study footprint, the following are considered:

Archaeology, Palaeontology and Meteorites

Under the Definitions of the NHRA, it states that:

1. In this Act, unless the context requires otherwise—
 - (ii) “archaeological” means—
 - a. material remains resulting from human activity ... older than 100 years, including artefacts, human and hominid remains and artificial features and structures;

Section 35. Archaeology, Palaeontology and Meteorites states that:

- 35 (4) No person may, without a permit issued by the responsible heritage resources authority—
- (a) destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or any meteorite;
 - (b) destroy, damage, excavate, remove from its original position, collect or own any archaeological or palaeontological material or object or any meteorite;

Artefacts and features under this heading would include Early, Middle and Late Stone Age sites and artefacts, Settler and Colonial objects and sites.

Rock Art

Under the Definitions of the NHRA, it states that:

- 1 (ii) (b) 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;

While an initial investigation during this survey did not identify any rock art, or likely rock shelters within 100 meters of the study footprint, it is possible that such sites do occur, and that a more focused search may identify such features.

Structures

The NHRA states that, in relation to structures:

34 (1) No person may alter or demolish any structure or part of a structure which is older than 60 years without a permit issued by the relevant provincial heritage resources authority.

Structures include both prehistoric and historic structures. The most obvious structures are buildings, walls, stone heaps, and past homestead features. This section also applies to non-ruined structures, in general.

Grave and Burial Grounds

Under Definitions in the NHRA, the word:

2 (d) (xiii) *“grave” means a place of interment and includes the contents, headstone or other marker of such a place, and any other structure on or associated with such place;*

Section 36 of the NHRA discusses Burial Grounds and Graves. It states that:

36 (1) No person may, without a permit issued by SAHRA or a provincial heritage resources authority—

- (3) (b) *destroy, damage, alter, exhume, remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority;*

Living Heritage

Under the Definitions, the NHRA defines Living Heritage as:

- 2 (xxi) *“living heritage” means the intangible aspects of inherited culture, and may include—*
- b. cultural tradition;*
 - c. oral history;*
 - d. performance;*

- e. *ritual;*
- f. *popular memory;*
- (f) *skills and techniques;*
- (g) *indigenous knowledge systems; and the holistic approach to nature, society and social relationships;*

In the context of this report it may also refer to farming practices that have been practiced in the area by set ethnic groups of people who have engaging in this practice for hundreds of years in this area. It also includes the associated buildings and spaces utilized in this activity. Farm stalls selling cultural produce, essentially from the Afrikaans community, is included in this category.

Cultural Landscapes

Landscapes embodying cultural significance are afforded protection under Section 38(1)(c)(i) of the NHRA, in which the affected property requires a heritage assessment based on its size of greater than 5000 m².

Palaeontology

Under the Definitions of the NHRA, Palaeontology is described as:

(2) (xxxi) “palaeontological” means 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 trances;

5. Requirements of a Heritage Impact Assessment Phase 1

A **Heritage Impact Assessment Report** of a development site should generically cover:

1. The identification of all heritage resources within the development footprint, and in the area surrounding the site in question;
2. The mapping of these heritage resources;
3. An assessment of the heritage significance of these resources;
4. An assessment of the potential impact that the development would have on these heritage resources;

5. An appraisal of the impact such development would have on the affected heritage resources, in relation to the sustainable social and economic benefits to be derived from the development;
6. Public and Stakeholder Consultation;
7. Various options available to the clients and developers should the development adversely affect the heritage resources.
- 8.

The wording, as stipulated in the NHRA Section 38(3), is:

(3) The responsible heritage resources authority must specify the information to be provided in a report required in terms of subsection (2)(a): Provided that the following must be included:

(a) The identification and mapping of all heritage resources in the area affected;

(b) an assessment of the significance of such resources in terms of the heritage assessment criteria set out in section 6(2) or prescribed under section 7;

(c) an assessment of the impact of the development on such heritage resources;

(d) an evaluation of the impact of the development on heritage resources relative to the sustainable social and economic benefits to be derived from the development;

(e) the results of consultation with communities affected by the proposed development and other interested parties regarding the impact of the development on heritage resources;

(f) if heritage resources will be adversely affected by the proposed development, the consideration of alternatives; and

(g) plans for mitigation of any adverse effects during and after the completion of the proposed development.

This report reflects the independent opinions of the author, and its recommendations to the legislation, as well as that of international conservation principles.

6. Location of the Study Area and Footprint

This project concerns the construction a dual-carriage freeway covering 10.5 kilometers of road, initiating on the N1, from the intersection of the R60 with the N1 in Worcester East. It is located in the **Breede River Local Municipality**, within the **Cape Winelands District Municipality**. The project starts at the eastern edge of the town of Worcester (33° 37' 31.48" S 19° 28' 7.85" E).

Worcester is located within the Cape Winelands Magisterial District, but on the northern edge of the iconic Cape Winelands encapsulating the towns of Somerset West, Franschhoek, and Stellenbosch. The entire district forms a Cultural Landscape including a plethora (hundreds, even thousands) of heritage and historical sites. Many of these are of great provincial, national, and even international significance.

Worcester also forms part of the Breede River Valley.

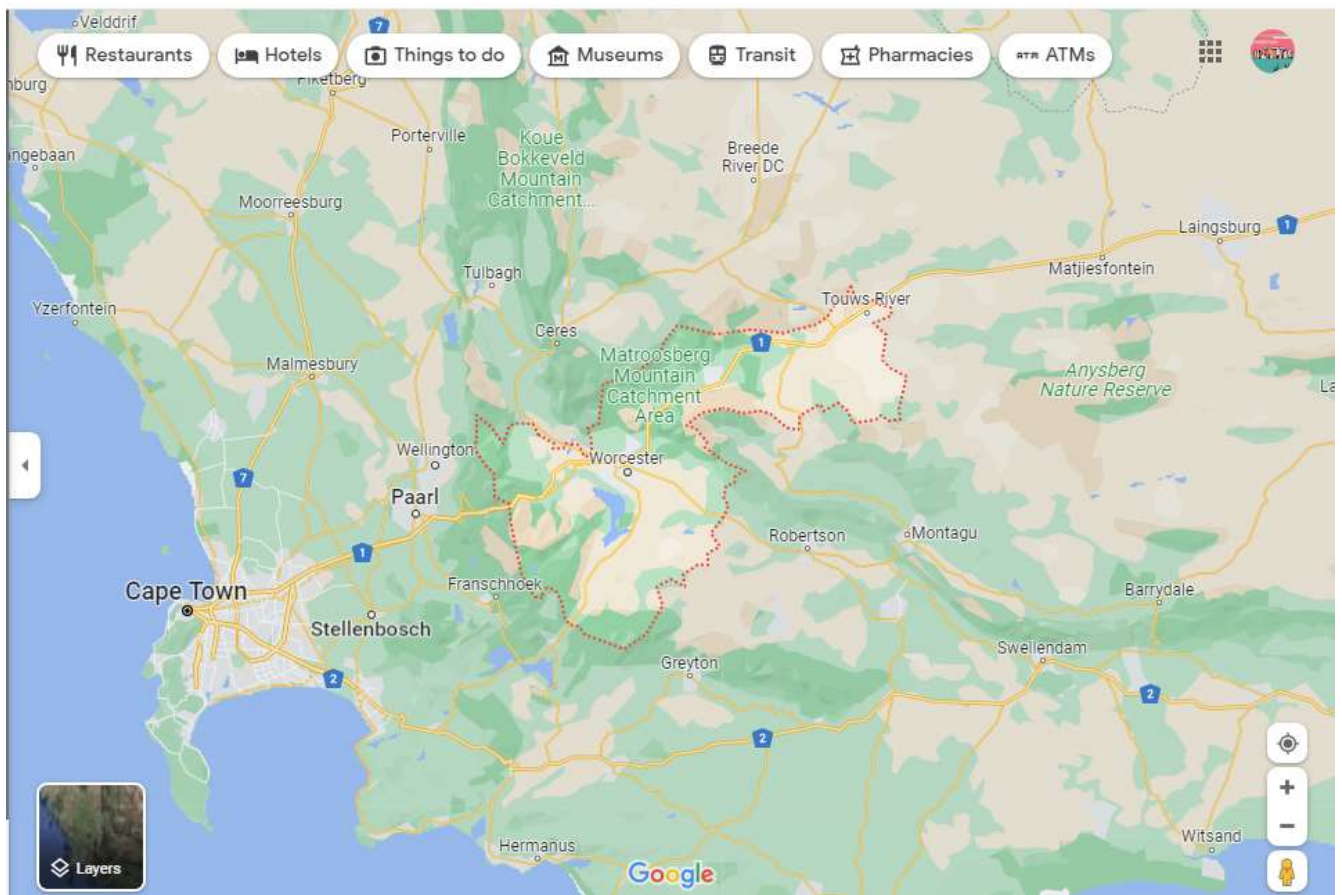


Figure 7. The above map outlines the Breede River Municipality. Worcester is squarely centered within this municipality. Source: <https://www.google.com/maps/place/Breede+Valley+Municipality/@-33.6561249,19.3204422,10z/data=!4m6!3m5!1s0x1dd27effe602b05d:0xad2db045317cc0e1!8m2!3d-33.7272263!4d19.4735066!16zL20vMDU4a2wx>

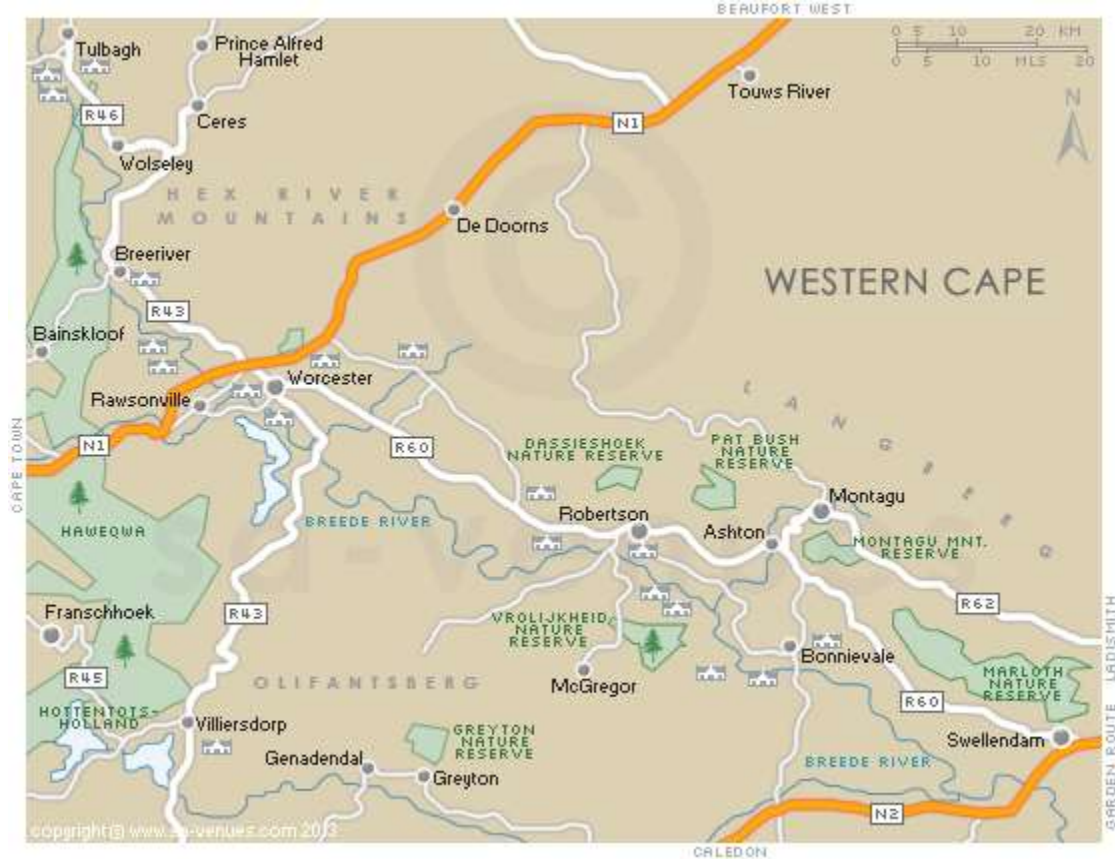


Figure 8 . The actual Breede River region is a geographic region which lies to either side of the Breede River. As can be seen from the above map, Worcester lies well within this geographic, floral, and historic region. Source: <https://www.sa-venues.com/maps/western-cape-breede.htm>

Present in the area are Early, Middle and Late Stone Age sites, and San Rock Art, but it is the features, sites, spaces, buildings and structures associated with European Settler and British Colonial history, that are of outstanding value here. The region continues to be a Living Landscape today – a Living Cultural Landscape – upon which historic wine farms continue as working farms producing wines, brandies, liquors, and many other products associated with high quality, meeting international standards. Indeed, the Cape Winelands produces some of the finest wines and brandies in the world.

In addition to this, the Cape Winelands has become an epicenter for historic Settler and Colonial history, and has now also come to incorporate the cultural expressions of other ethnic groups, notably in the exploding fine art and culinary culture with which it has been, and continues to become, synonymous. To add to this, it is a *growing* Culturescape, with

tremendous (and continuous) historic aesthetic appeal. Care has to be taken not to detract from this by modern development initiatives. Worcester is one of the oldest towns in this historic Culturescape, and it is comprised, to a significant extent, of historic buildings and spaces, which should be kept intact.

To add further, the Culturescape includes the sense of “wilderness” -- of authenticity in wildness and domesticity. This combined landscape character – the combined elements which form the Sense of Place of the Winelands should be ideally (and legally) circumvented from being distorted, disfigured, or disrupted by Modern Development initiatives.



Figure 9. Regional map placing the city of Worcester in regional context. Source: <http://www.maphill.com/south-africa/detailed-maps/detailed-satellite-map/>



Figure 10. The Cape Winelands Magisterial District and Cultural Landscape delineated by the red colour.

Worcester is situated well within this landscape and region. Source:

https://en.m.wikipedia.org/wiki/File:Map_of_the_Western_Cape_with_Cape_Winelands_highlighted_%282016%29.svg



Figure 11. This figure illustrates the proposed improvement route in relation to the town of Worcester.
Image: Delta BEC, BID Document.



Photo 5. Worcester area of the Cape Winelands Cultural Landscape. Atmospheric farm houses nestle within fields of agricultural land in the valleys, while the indigenous flora of the mountainous wilderness about provides a wild and dramatic backdrop to the historic domesticity of the historic cities and towns with their Settler and Colonial architecture. Together, all of these elements combine to create one of the most unique historic character Living Landscapes in the world. Photo: <https://www.cape-winelands-info.co.za/region/town/235>



Photo 6. Farmsteads nestle among the vineyards, with the wilderness of the mountains behind. Worcester area, Cape Winelands. Photo: <https://www.cape-winelands-info.co.za/region/town/235>



Photo 7. The visuals and the character of the landscape are very similar wherever you look in this region. The Sense of Place is extremely strong. Worcester area. Photo: <https://www.cape-winelands-info.co.za/region/town/235>



Photo 8. Farmland lying to the west of the N1, at the initiation of the project route, 27th March, 2023. This lies opposite the intersection of the R60 with the N1. The road was very quiet. On the hill to the right of the photo were some curious marks on the southern side of the hill (orange arrow), most likely caused by a die-off in indigenous “Fynbos” and “Protea” vegetation. Photo: Sian Hall.

7. History of the Area

This general region is known to have various heritage features from a number of different periods of the country’s prehistory, and history. These include:

- Early Stone Age (largely unprovenanced scatters in the Worcester area);
- Middle Stone Age (largely unprovenanced scatters in the Worcester area);

- Late Stone Age (the period usually associated with the San hunter-gatherers. Late Stone Age is less prevalent in the area than Early and Middle Stone Age artefacts);
- San Rock Art (this is not abundant, but present on some hills and mountains);
- Settler History;
- Colonial History;
- Cultural Landscapes (Cape Winelands);
- Living Landscapes (Cape Winelands and historically-based farming community; a small historical city – one of the oldest in South Africa);
- Graves from essentially the Historical Period, to the present.

A number of significant historical and heritage sites, features, and certain forms of human activity on the landscape were discovered during the desktop and field survey of the various footprints. These trigger certain sections and clauses / regulations of the South African National Heritage Resources Act, No. 5 of 1999.

The Breede River Valley Region has been populated by humans for more than a million years, and it was one of the earliest areas in southern Africa to be settled by settlers of European descent, dating to the early 1700's. It is only to be expected that the Breede River Valley-Langeberg District is heavily littered with both prehistoric, and historical and heritage sites, dating from 1.5 million years ago until the present.

7.1. Prehistory of the Breede River Valley Region

The Breede River Valley Region presents both Early Stone Age (Acheulian) artefacts, Middle Stone Age Artefacts, and Late Stone Age (Bushman or Khoisan) artefacts. Acheulian, Middle Stone Age assemblages, and Later Stone Age artefacts are to be found over much of the Breede River Valley Region, however, much of these incidences are no longer in context. In fact, almost all Acheulian assemblages in southern Africa are now situated out of context, and are mostly from disturbed open-air locations. There are very few in-situ assemblages in rock shelters, but one such assemblage is located in Montagu Cave (Keller 1973 in Mitchell 2002: 60).

The date of these Acheulian artefacts is between 250, 000 and 1.7million years ago. These dates are approximate since, as Mitchell (2002: 61) points out, the transition between Acheulian and Middle Stone Age is somewhat of a grey area. The same may be said for the Middle Stone Age (MSA) tradition. In fact, MSA artefacts overlies Acheulian ones at only a small

number of caves in southern Africa (ibid), of which Montagu Cave is a fine example. These two Stone Age traditions may however, be separated by a long hiatus of time (ibid).

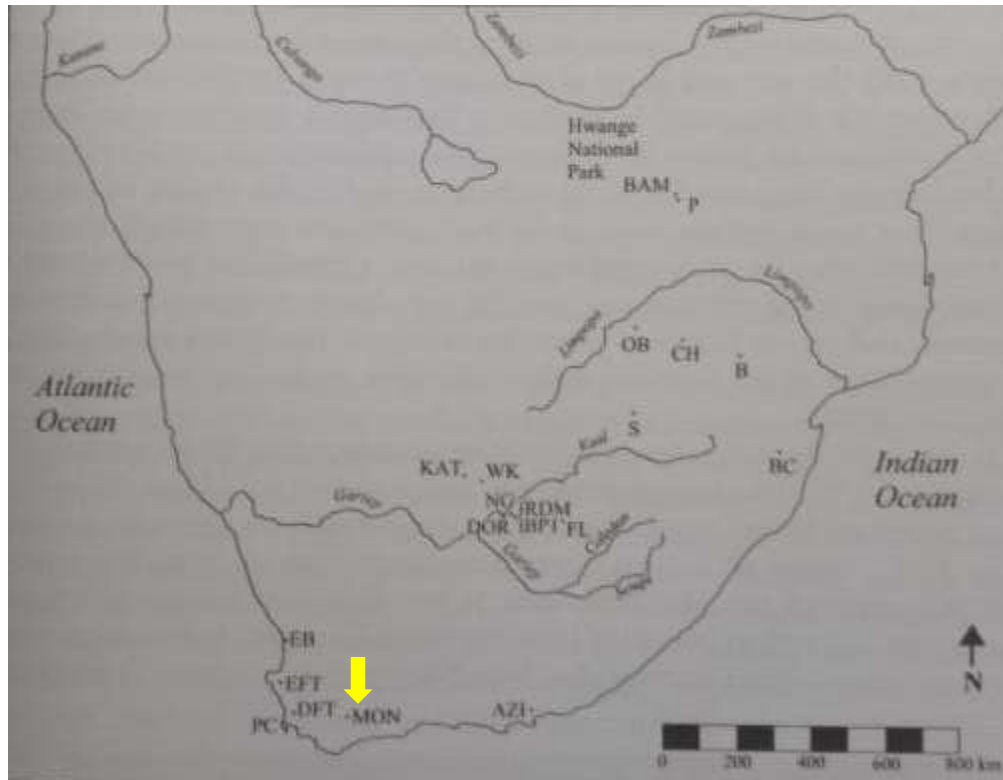


Figure 12. The location of Montague Cave (Yellow Arrow) in relation to the few other cave sites that contain in-situ Acheulian and Middle Stone Age assemblages. Source: Mitchell, 2002: 60).

7.2. History of the Breede River Valley

The Breede Wine Valley is one of the oldest areas in South Africa to be inhabited by European descent settlers. As early as early 1700's a large tract of land named *Over Het Roode Zand*, fell within the expansive boundaries of the Swellendam District. In 1728 this large tract of land was let to a Mr. P. Joubert. Soon, other migrant farmers were attracted to this land as it was suitable for grazing their sheep. By 1800, many such farmers had settled on pieces of land which had been sub-divided from the large tract. These were purchased (and not rented) from the Government. In fact, the names of some of these original farms are still evident today in the

names of districts within the area, such as Roodezant, Le Chasseur, Retreat, Noree, Goree, Vink Rivier, Willem Nels River, Klaasvoogds, Goudmyn, Vrolikheid and De Hoop².

The Farm Roodezant is of significance when considering the history of Robertson area. During the years 1728 and 1790 the farm changed hands numerous times, until in the 1840's it belonged to a Johannes W. van Zyl. Church services for the area were held in his home, and these were conducted by a Dr. William Robertson (who was the Dutch Reformed Minister of Swellendam) when he visited the area³.

By 1852 the community had grown to such an extent that a more substantial infrastructure and structured society was required. As a result, the local Dutch Reformed Church purchased the farm from Mr. Van Zyl for the exorbitant price of 4,200 Pounds. Surveyors Van Rheenen and Hopley were employed to lay out the town which was named Robertson in honour of Dr. Robertson for his many services to the community⁴.

Plots were sold at 40 Pounds each, but the date of the birth of the town is taken to be the date of the laying of the cornerstone of the Dutch Reformed Church in 1853. The Church was completed in 1856. It was demolished in 1905 when a larger and more impressive church was built upon the old foundations. Churches of other denominations were to follow with the Wesleyan Church in Paul Kruger Street completed in 1859, and the building of St Mary's Anglican Church, designed by Sophie Grey, Bishop Grey's wife, beginning in 1862⁵.

Trader's played a major role in building the economy of the town. Joseph Barry of Swellendam traded with farmers of the area beginning in the 1840's. This family soon became permanent residents in the town when they purchased a prime block of ground behind the Dutch Reformed Church. Here, a well-known general dealer's store, and wine cellar were soon built⁶.

During 1860 the townsfolk of the village of Robertson were shattered by first a measles epidemic, and then by an epidemic of enteric fever. Food aid, and assistance with nursing the sick, came from as far afield as Montagu and Worcester. Eighty-nine people died in total, which was a significant proportion of the growing population⁷.

By 1880 few farmers were yet wealthy, but the district was already becoming a recognised fruit, wine and brandy producing area. It also became an established ostrich farming area since, at

² Saacks, B. Mrs, History of Robertson: <https://www.robertsonr62.com/robhist> .

³ Saacks, B. Mrs, History of Robertson: <https://www.robertsonr62.com/robhist> .

⁴ Ibid.

⁵ Ibid.

⁶ Ibid.

⁷ Ibid.

this time, ostrich features had become high fashion overseas. Wagon building however, was at that time, the main industry of Robertson. Church records of the time repeatedly mention associated occupations, such as wheelwrights, blacksmiths, carpenters, upholsterers and professional transport riders⁸.

It was during this period that the Breede River Irrigation Scheme was implemented. This scheme delivered water by means of canals from the River to the various farms, and this improved their production tremendously. This increase in productivity was also reflected economically since, in 1891, the Standard Bank Manager's Report stated that the income for the area was between 30, 000 and 40, 000 Pounds per annum. The general region had indeed, become very prosperous⁹.

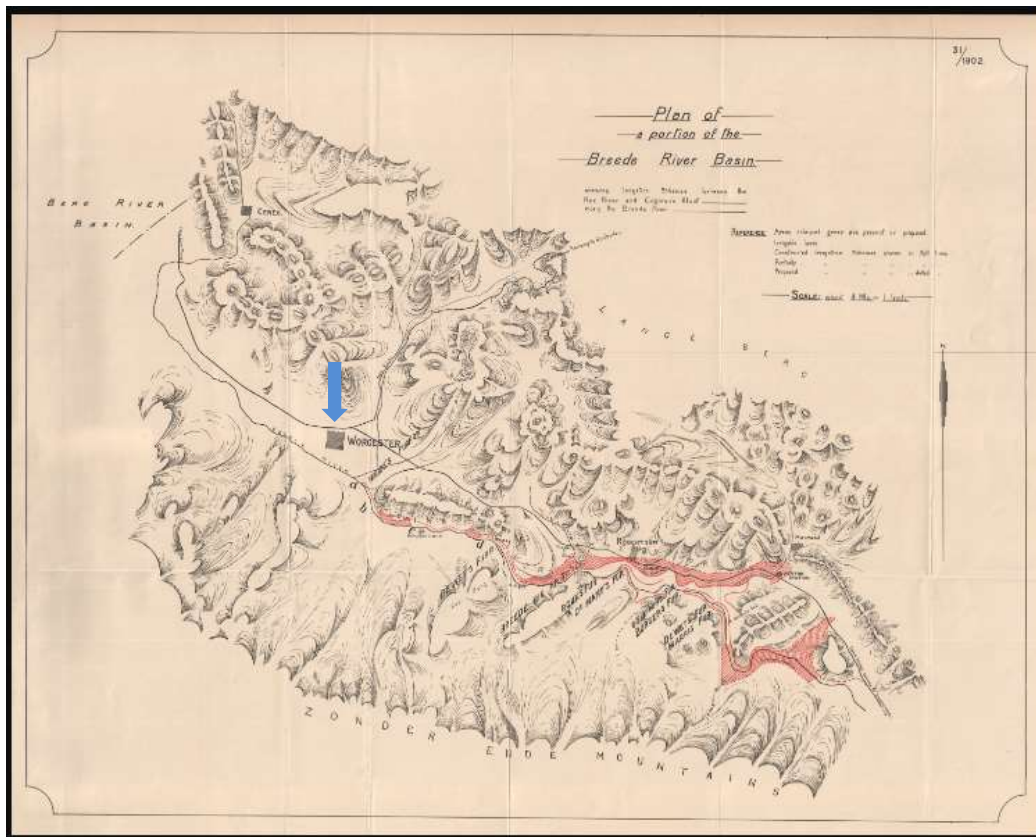


Figure 13 . This is a historic map of the Breede River Basin, within the Zonder Ende and Lange Berg. It shows the area running from Ceres, through Worcester and Robertson, to Ashton and Montagu. The map shows a portion of the Breede River Basin irrigation schemes between the Hex River and Cogman's

⁸ Ibid.

⁹ Ibid.

Kloof, along the Breede River. Worcester is indicated by the blue arrow. Creator: Cape of Good Hope (Colony). Public Works Department. Date: 1902. Source: University of Cape Town Libraries, Special Collections. Cape of Good Hope Parliamentary Papers. Website:
<https://digitalcollections.lib.uct.ac.za/islandora/object/islandora%3A29790/datastream/OBJ/view>

During the Anglo-Boer War of 1898 -1902 a British garrison was stationed in Robertson under the command of Lieutenant Cooper. However, even before the end of the war the wagon industry in the area had collapsed, while the railways stepped in to transport goods. The commencement of the First World War in 1914 led to many young men leaving town to go to join the Front Line in France. The War came with an additional local cost – in 1915 the ostrich feather industry collapsed. It was the ruin of many farmers, while Robertson, unlike Oudtshoorn and Ladysmith, did not depend entirely on the ostrich production industry. In fact, it was around this time that the wine farming industry burgeoned into the multi-million Rand industry that it is today. Today, the wine industry and racehorse breeding may be considered the major industries of the area, contributing greatly to the local economy¹⁰.

While there are abundant formally registered and protected heritage sites in the historic towns of the Breede River Valley - Langeberg District, there is only one Registered Farmstead.

7.3. A Brief History of Worcester

The town of Worcester is named after the Marquis of Worcester, who was the elder brother of Governor Lord Charles Somerset. It had its beginnings in 1820 when two old Loan farms, “Roodeval and Landerug, had been bought for this purpose. The district had been declared a sub-drostdy of Tulbach, just the previous year. Work immediately began on the drostdy, and completed in 1905. It is still regarded as being the finest Regency-style building still present in the Cape (Brooke Simons, 1987: 196).

The imposing Dutch Reformed Church, with its tall steeple, was built in 1831. In that same year the foundations of the Rhenish Mission Church were laid. Around, and between, the public buildings, thatched houses were being built, designed in the traditional Cape style, but with front gables, which became to be regarded as being typical of Worcester residences (ibid).

¹⁰ Saacks, B. Mrs, History of Robertson: <https://www.robertsonr62.com/robhist> .

The town became a busy magisterial centre, and hub of a growing farming district. The town developed even further when the main railway line reached it in the 1870's (Ibid).

A large number of historical buildings have survived among the modern buildings of this town. This appears to be due to the fact that unlike, Stellenbosch, Paarl and Wellington, a major fire never swept through the town. This is just as well for all the historical thatch buildings that remain intact (Ibid).

Wellington Church Street is regarded as being among the best-preserved street complexes in the Western Cape. The lovely old museum buildings, which are centrally situated and face the open square give a distinctive sense of character to this part of the town (Ibid).

There are a great many lovely old buildings in Worcester, and around. To mention some are:

- Worcester Museum (Beck House);
- The Afrikaner Museum;
- No's 1 – 3 Trappes Street;
- La Plaisante (De Plaisante Plaats);
- Kleinplasia (Roedewal)
(Simons 1987).

8. Character and Sense of Place of the Breede River Valley

The Breede River Valley is a flat, broad valley surrounded by rugged and wild Cape Folded Mountains. The valley itself is a highly domesticated landscape, composed of essentially agricultural lands, and small historical towns. The farming landscape is comprised of vineyards and wine outlets; thoroughbred racing studs; olive plantations; and ostrich farms. It is also a tourist destination for both national and international tourists with tourist facilities also characterising the area.



Photo 9. The Breede River Valley is a broad, level valley, surrounded by rugged mountains. As can be seen from this photograph, the Valley itself is a highly domesticated landscape upon which intense agricultural activities have taken place over several centuries. Photo: Adolfo Linares.

Historical buildings including Cape Dutch architecture, Georgian and Victorian architecture are prominent in the towns and on the farmsteads. It is also an area rich in prehistoric Stone Age period sites including the Acheulian Period, Middle Stone Age and Later Stone Age Khoisan traditions. These archaeological artefacts are largely unprovenanced in open air scatters on virgin land on and within the mountains and mountain slopes. An exception to this rule is the Heritage Site of Montagu Cave with contains in-situ Acheulian and Middle Stone Age artefacts.



Figure 10 . The lovely Cape Dutch-style architecture which characterises the historic town of Robertson and numerous farmsteads in the Breede River Valley. A distinctly old-world character prevails in the towns and certain farmsteads of the area belying its early Settler history.

Although the Breede River Valley is an area rich in history, and although it is one of the earliest areas of South Africa to be settled, and also rich in prehistoric material, it is also an area which has not been well-researched.

9. Background Information of the Survey

9.1. Methodology

9.1.1. Desktop Study

Desktop Study: Before any site visit was made to the study footprint, a detailed desktop analysis was made of the study footprint and the impact that the proposed development may have. This desktop study comprised the following:

- The study of available aerial photographs covering the footprint;
- The study of available heritage databases;
- Literature survey covering the study area;

- An examination of the SAHRIS website database covering previous surveys in the greater area, and the listing of known heritage sites and features, were consulted for potential heritage site reports covering the area.

The field survey was conducted on the 27th March 2023, using accepted archaeological survey methods.

9.1.2. Guidance from the Desktop Study

The desktop study indicates that:

- Several archaeological studies have been conducted in the Worcester area;
- Stone Age Sites of Early, Middle and Late Stone Age traditions may occur in the greater Worcester area;
- Most of these incidences are of low-density scatters, spread thinly and often unevenly across the landscape;
- Many of these artefacts are badly preserved;
- Many ESA artefacts are badly weathered and rolled (rounded) when found in river terraces;
- Many contexts in which they occur are severely degraded and disturbed;
- The bad advanced weathering of the EIA / MSA artefacts make it difficult to distinguish naturally broken cobbles from flaked ones;
- Many Stone Age artefact incidences are unprovenanced and so may have little research value;
- As a result many, if not most, have a low local significance. Certain reports specify a grading of Grade 3C for these weathered and damaged artefacts;
- Many of these finds have been discovered on farmlands, and also some not far from, or adjacent to, the N1 motorway;
- ESA tools were discovered on the Farm Glen Heatlie, where the proposed project ends in the north-west of the linear footprint, and in the alignment of the Worcester Eastern Bypass;
- Later Stone tools are lesser in abundance, but present in the area;
- MSA and LSA tools were largely made out of quartzite
- San rock paintings have been recorded in Goudini;
- As recent as the late 17th century, Hassequa (Khoekhoe) herders seasonally occupied the Worcester area;

- The area is noted, by previous heritage assessors, to have significant scenic qualities;
- The area is renowned for its many intact, and very early, historic Settler Period buildings, and for the historic use of space within central Worcester;
- The region is also distinctive as a Cultural Landscape within which a multitude of historic structures and spaces remain intact;
- The region is a Living Landscape in which historic identifiable cultural activities are continued into the present;
- The region is also identifiable as one of the most visually dramatic and scenic areas in South Africa.

9.1.3. Site Visit

Site Visit: a site visit was made to the study footprint on the 27th March 2023. The study footprint was travelled by vehicle, and areas that looked to be sensitive were walked and examined carefully according to accepted archaeological methodology. Not all areas could be accessed easily because of steep fall-aways, or rises, from the roads, or because of farm fencing. In certain areas traffic also hampered accessibility to certain spots.

9.1.4. Stakeholder Consultation

A discussion was held with the lady who runs the Tweefontein Padstal. This is a historic building, certainly older than 60 years of age. This was a general discussion intended to obtain some information about the farm stall, and the building in general. Permission was given to photograph the store, and the details and contact number of the owner was obtained.

A telephonic discussion with environmentalist Neelan Maduray conveyed that the intention of the proposed project was to help alleviate traffic congestion on the proposed route, and to minimize dangerous entrances and exits from the route.

On the 9th March, 2023, a telephonic conversation was held with Mrs. Hester Nordeé, the owner of the Tweefontein Padstal. She was unaware of any plans for a proposed dual carriageway to run past her property. She was reluctant to provide much information until having spoken to her husband. She could not give me a date for the origins of the building, only to say that she had owned it for 30 years. She added that the building had previously been horses' stables, and before that it had been an old cellar.

9.1.5. Photographs

A large number of photographs documenting the linear footprint area were taken.

9.1.6. Restrictions Encountered During the Survey

Visibility

Visibility was generally good. However, there were areas on the side of the roads where the vegetation was sufficiently thick so as to hamper full visibility.

Conditions

Conditions were good, for the most part, except for the obvious danger posed by large trucks that passed within just a few feet of the field worker as she walked the roads to search for stone tools on the sides of the N1.

Stakeholder Consultations

No hindrances were encountered regarding speaking to individuals with whom field workers wished to converse with.

Disturbance

The farmlands were largely covered with indigenous fynbos and protea vegetation. The sides of the roads often exhibited much erosion. There was also quite often extensive litter on the sides of the road.

10. Assessment of Significance and Value of the Study Area and Footprint

10.1. Locational Data

Province: Western Cape.

Municipality: Breede River Local Municipality; Cape Winelands District Municipality.

Town: Worcester is the closest town to the study area.

10.2. Description of the General Area Surveyed

This has already been largely covered in the report, except to say that the area relating to the study footprint initiates with modern built structures of little significance to the south-west of the linear footprint; it comprises of farmland for the remainder, to the end point to the north, east of the starting point closest to Worcester.

The inhabitants of this area are largely comprised of Afrikaans-speaking descendants of historic European Settlers to the Cape, and of Cape Coloured ethnic groups. The family structures are largely that of the nuclear family within the European population, and the nuclear family, or extended family structure, within the Coloured community. The farmlands are owned by people of White ethnic identity, while the farm workers tend to be of Coloured ethnic identity.

The surrounding vegetation is of indigenous fynbos and protea vegetation types. Worcester lies on a level area, while it is surrounded by undulating land, comprised of hills and mountains.

10.3. Topography

Below are two topographical maps which clearly show the terrain of the study area.

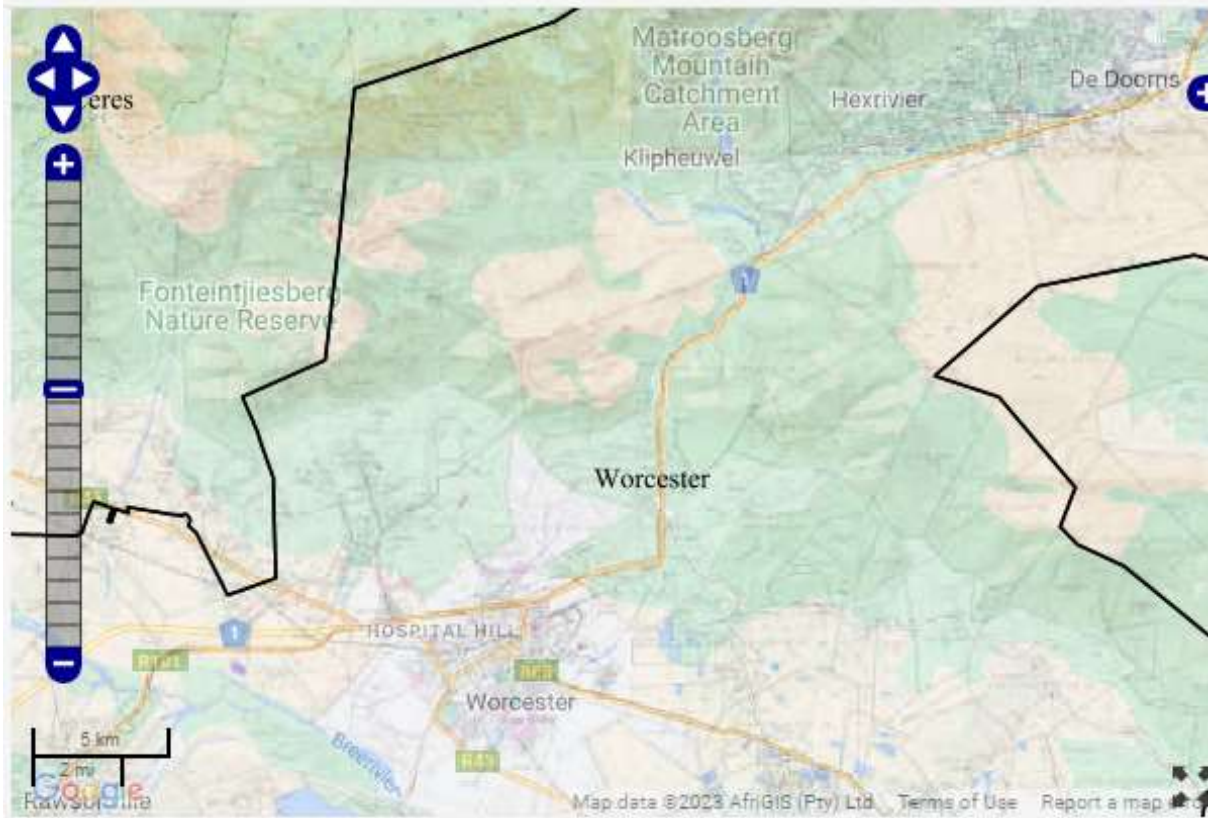


Figure 14 . 1: 50, 000 topographical map of the study area. SAHRIS Website.



Figure 15. Topographical map of the study area. Source: Google Maps.

11. Heritage Markers on the Study Footprint and on the Surrounding Area

11.1. Early and Middle Stones Ages

In the General Area

Early Stone Age: A number of Heritage Impact Studies have been conducted in the Worcester area. These have shown that the area (including the Breede River Valley, in general) is characterised by largely unprovenanced scatters of Early and Middle Stone Tools of various descriptions. These are largely from disturbed sites or river terraces, and the artefacts themselves are most often weathered, damaged, sometimes to the extent of being indistinguishable from rocks that have been broken through natural causes. On the Farm De Mond van Hartebeest Rivier, 379, to the West of Worcester, Orton (2008) found that many lithics were well-rounded from having lain for a considerable amount of time in the river terrace, with running water having degraded them. Orton (2008) has noted that many ESA tools are made from high quality sandstone, perhaps even quartzite.

ESA tools have been documented on the Farm Glen Heatlie, the very farm which lies at the very northern end of the proposed development (Kaplan, 2006), and also in the alignment of the Worcester Eastern Bypass. They have also been found in the vicinity of the Molenaars River, alongside the N1, near Worcester. ESA tools have also been found on various farms on the outskirts of Worcester (ibid).

Amongst the types of Early Stone Age tools that have been found are handaxes and bifaces (Kaplan, 2021). A handaxe has been documented on the farm Altona, immediately to the north-west of the N1 (Kaplan, October 2006).



Weathered Early Stone Age handaxes from the Breede River Valley. Source: Slabbert, 2011: 21.

Extremely weathered Early Stone Age Tools. Nearly indistinguishable from crude rocks, to the unpracticed eye. Source: Slabbert, 2011: 21.



Rough and weathered Early Stone Age Tools, very much like what could expect to find on the Study Footprints. Source: Slabbert, 2011: 21.

Photo 11 . Examples of Early Stone Age Artefacts from the Western Cape. Examples from the study area are likely to be similar in type.



Dorsal surface of Early/ Middle Stone Age flakes from the Breede River Valley. Source: Orton, 2009:8.

Ventral surface of Early/Middle Stone Age flakes from the Breede River Valley. Such tools may possibly occur on the study footprints. Source: Orton, 2009:8.



Middle Stone Age Flakes from the Breede River Valley. Such tools may be found on the study areas. Source: Kaplan, 2011.

Photo 12. Examples of Middle Stone Age Artefacts from the Western Cape. Examples from the study area are likely to be similar in type.

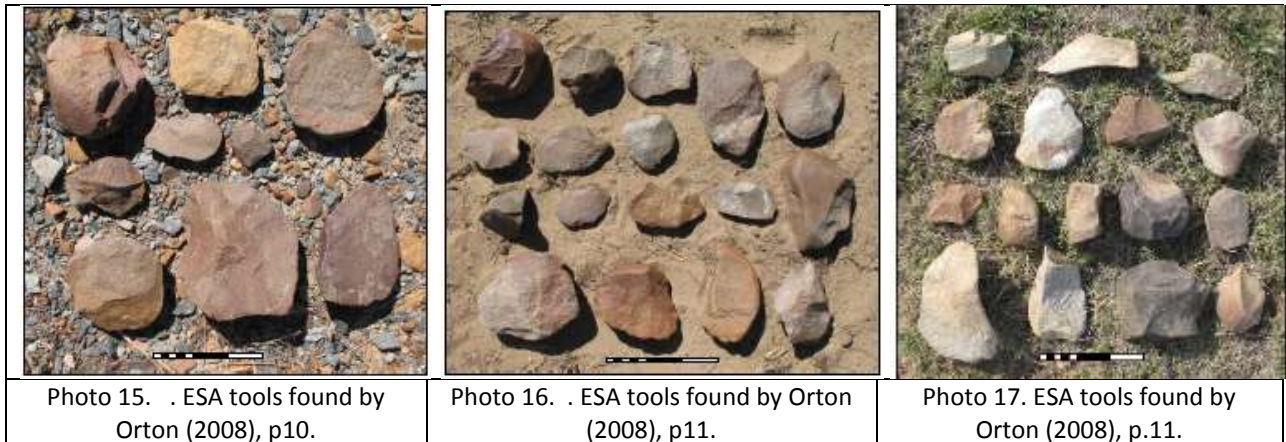
Early Stone Age (Acheulian) artefacts in particular, can be very crude, and to the unpracticed eye may appear to be nothing more than crude pebbles, or rocks. The examples given in the photos below testify to this. These artefacts are from the Breede River Valley.



Photo 13. Upper grindstones – could date to any Stone Age Period. They form an example of some of the Stone Age artefacts which are typically found in the Breede River Valley. Source: Slabbert, 2011: 21.



Photo 14. Worn upper grindstones from the Breede River Valley. Source: Slabbert, 2011: 21.



Some of the above tools are very similar to that which I found on the sides of the N1 on a cobble stone terrace, and which is still subject to running water when it rains.



Photo 18. Crude pebble chopper reminiscent of the Oldowan Period (EIA), found by Orton (2008), p. 11.



Photo 19. Crude pebble chopper reminiscent of the Oldowan Period (EIA), found by Orton (2008), p. 11.

This chopper is very similar to those which I found in what appears to have been an old river terrace on the sides of the N1, north of Tweekfontein Padstal, at the co-ordinates: 33°36'6.47"S, 19°30'32.56"E. There were also a number of weathered pebbles that could have been worked, but they are so badly weathered that it is almost impossible to tell. There are probably a number of these cobbled terraces on the sides of the N1, observed on the northern section of the proposed development.



Photo 20. Acheulian Biface, found by Orton (2008), p. 12.



Photo 21. Acheulian Biface, found by Orton (2008), p. 12.

Acheulian Biface found by Orton on the Farm De Mond van Hartebeest Rivier, 379, is very similar to the weathered cobbles present on a cobbled terraces on the sides of the N1, on the northern sections of the proposed development.

Middle Stone Age: It is Middle Stone Age remains, however, which overwhelmingly dominate the incidence of archaeological remains in the area (including the Breede River Valley, as a whole) (Kaplan, 2021).

At Portion 12 of Farm 481 Scherpe Heuwel, near Worcester, Jonathan Kaplan encountered MSA tools on a large patch of sheet washed and worked gravels, alongside a deep donga. These lithics comprised of a few unmodified flakes, chunks and one worked-out core. They are all fashioned from the locally available quartzite. No formal tools were found, such as points or scrapers (Kaplan, 2021).

At Portion 5 of Farm 342 De Nonna, Kaplan (2015) discovered about 90 stone implements, of which 99.9% belonged to the Middle Stone Age. There was only one Late Stone Age tool. Again, all of these were made from the locally available quartzite. Most of the MSA tools were

unmodified flakes and chunks. There were a number of retouched / utilized flakes, but no formally retouched tools, such as points, or scrapers. Among the tools were two well-crafted pointed flakes, and only two cores. A few more highly dispersed scatters of tools were noted on eroded gravels.

Overall, the badly weathered, and general lack of formal tools in the Worcester area have prompted archaeological heritage practitioners to largely grade the incidences of stone tools in the area as low, Grade 3C significance. Much of the artefacts encountered are from disturbed contexts, badly weathered, with a low incidence of formal working. As Kaplan (2015) has found, in some areas tools are mostly flakes or chunks, indicating discarded flakes, or flake debris. There is also a general lack of factory sites, or prehistoric human settlements.

Early Stone Age and Middle Stone Age Incidence During Fieldwork

Badly weathered cobbles / stones were encountered during the fieldwork study. These are located at the GPS co-ordinates, 33°36'6.47"S, 19°30'32.56"E, among cobbled terraces which extend in areas along the N1 freeway, mostly in the northern section of the proposed development. A number of cobbles appeared to be Early Stone (possible some Middle Stone Age) tools, but are so badly weathered that it is difficult to tell whether they are the result of human activity, or fashioned by natural phenomena, such as the movement of water in the donga.

This cobble stone terrace occurs in Defo alluvium from which water worn cobbles were selected, and which accumulated, and which is out-of-context, having most likely shifted downstream / down-slope with the colluvium from the original site/s further up the valley, and which is still subject to running water when it rains.

Such sites are ubiquitous in the Cape Folded Mountain System. The rivers in this region, although not of great size, do run at high velocity due to the topography of the landscape. This contributes to the weathering of archaeological sites, and is also responsible for the movement of alluvium within which these artefacts are located, transporting them from their original locations.

The EIS cobble stone terrace appears to be debitage, waste flakes, cores and chunks which were created during the preparation of formal tools by Homo erectus. This discard was then accumulated within the alluvium, as described above¹¹.

¹¹ Thanks to Len van Schalkwyk for commenting on the above.

A grade of 3C is attributed to this site in this report, however, it is suggested that, should any future development be likely to impact on this site, a specialist in the Early Stone Age should be called in to examine the site, and to write a report for HWC, advising further action regarding the future of the site. This is partly due to the site's potential scientific significance, its extent, the abundance of *Homo erectus* industrial waste, to the significance it provides to the prehistoric Cultural Landscape of the area, and Sense of Place. It is contended that, until such time that an EIA specialist assesses the site, it should remain Generally Protected with no disturbance inflicted upon it.



Figure 16. The location of the apparent cobblestone terrace, amongst which there appear to be Early Stone Age lithic artefacts. This is the site from which the photographed tools had come. There must be many more such terraces alongside the N1, but obscured by the vegetation and the impracticability of walking up, and then down, the entire length of the linear development. The Stone Age site is indicated by the yellow arrow. It is situated just opposite the cluster of corrugated iron sheet, and brick, buildings that are discussed further down in this report, and indicated by the light orange arrow. Google Earth.



Photo 22. Most probably a core from which large cutting tool was struck. Photo: Sian Hall.



Photo 23. The core is very weathered and this is a result of it having shifted with alluvium, and the accompanying action of rock on rock, and abrasion by soil. Photo: Sian Hall.



Photo 24. The effect of extreme weathering by running water, but mostly from the rolling action of rock on rock, and abrasion by soil, during movement in alluvium, or colluvium, is very obvious in this photograph. Photo: Sian Hall.



Photo 25. Another example of a cobbled core, or chunk from the Early Stone Age (Acheulian) terrace. This core / chunk was photographed in situ. Photo: Sian Hall.



Photo 26 . A chunk / core Early Stone Age artefact, the result of industrial waste, photographed on site, in situ. Photo: Sian Hall



Photo 27. Quartzite EIA Industrial waste from the EIA site. Probably a discarded production flake. Photo: Sian



Photo 28. Another view from the same artefact. Photo: Sian Hall.

Hall.	
-------	--



Photo 29. A side view of the above lithic. Photo: Sian Hall. .



Photo 30. The northern extent of the cobbled terrace from which the EIA artefacts came. Photo: Sian Hall.



Photo 31. A good visual of the cobble stone terrace, looking southwards, on the west side of the N1, and in the northern section of the proposed project. It shows how prolific these rocks and cobbles are and how extensive the site is. Photo: Sian Hall.



Figure 17 . This image illustrates a number of things. The first is the very steep topography of the mountain to the west of the archaeological site. This is illustrated by the yellow colour. The blue colour depicts the flat area below. The site is at the meeting point of the two (indicated by the red arrows). The dotted blue lines show the flow of rivulets down the mountains sides. The contours clearly show the palaeo-flow line and down slope drainage <https://gis.elsenburg.com/apps/cfm/>

11.2. Late Stone Age in the General Area

Later Stone Age artefacts and lithic objects are far less numerous than Middle Stone Age artefacts, and even Early Stone Age artefacts, in the general Breede River Valley region, and certainly within the general Worcester area. Various heritage impact assessments attest to this.

At Portion 5 of Farm 342 De Nonna, Kaplan (2015) discovered about 90 stone implements, of which 99.9% belonged to the Middle Stone Age. Among them there was only one Late Stone Age tool – a retouched, indurated shale flake. At Goudini and Rawsonville LSA tools have been found, and San rock art was also found at Goudini. Rock art has also been found at Quaggaskloof, and in the Slanghoek Valley (Orton, August 2008), and in the mountains between Robertson and Ashton (Kaplan, February 2021).

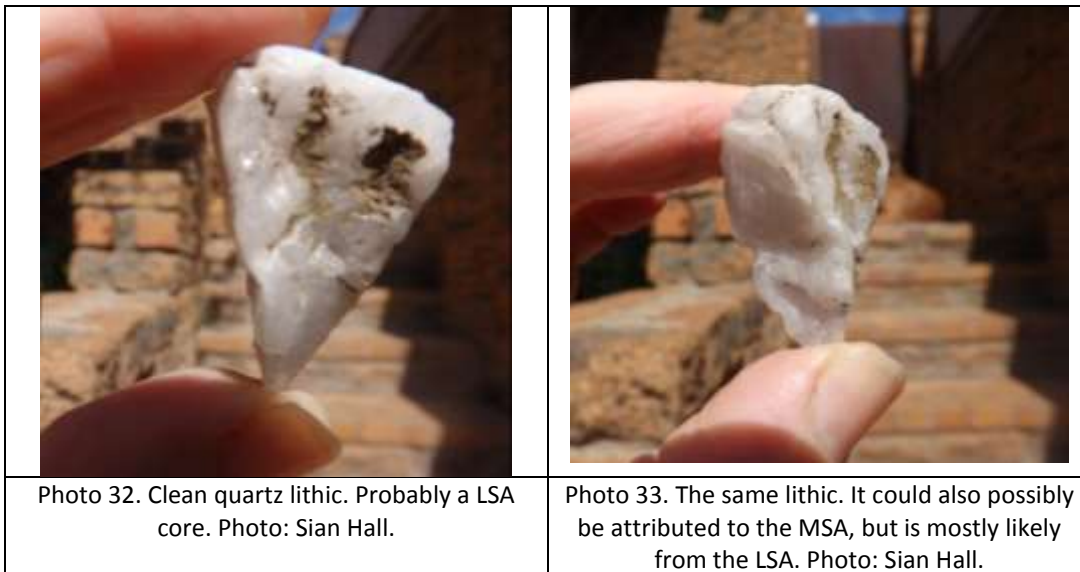
At the GPS reading S° 33 37 965 E° 19 25 768 was found a quartzite end-scraper. LSA flakes and chunks have also been found (Kaplan, October 2006).

It is known that the Hassequa (Khoekhoe) herders seasonally occupied the Worcester area during the late 17th century. In-situ scatters of microlithic LSA artefacts, such as cores, hammerstones, anvils, flakes and a pecked metal disc, found on a farm south-west of the R60 may be attributed to them. This is further suggested by pottery shards found alongside the R60. A possible Khoekhoen herder campsite was discovered alongside the Modderrivier, south of Kwaggaskloof Dam (Orton, August 2008).

All periods of Stone Age lithic tools reveal that there are low density scatters found in the Worcester area (Kaplan, October 2006).

Late Stone Age Incidence During the Field Survey

One crystal quartz Late Stone Age lithic (possible core)¹² was found during the field survey. The possibility exists that there may be others.



¹² There is a possibility that this lithic may possibly be Middle Stone Age, but it is more likely to belong to the Late Stone Age.



Photos 34 and 35. Another view of the same lithic. Photo: Sian Hall.



Photos 36 and 37. Show the bulb of percussion, and the sharp edges of the lithic. Photo: Sian Hall.





Photos 38 and 39. This was the only clear quartz lithic observed on the site, and the only lithic probably attributed to the LSA. Photo: Sian Hall.



Photo 40. Here the tool is shown with another lithic/pebble from the same site. Photo: Sian Hall.



Photo 41. The clear crystal LSA lithic photographed in situ on site. Photo: Sian Hall.

11.3. Settler and Colonial History

The Worcester area abounds with Settler history, as has already been discussed in this report. These largely take the form of historic buildings, structures and use of space. Two historic buildings would be severely impacted by the Options 1 and 2 of the proposed development. The first of these is Tweefontein Padstal, and the other is Uitvlug Guest House. There is also a cluster of houses on the east side of the northern section of the N1 which will be impacted by the proximity of the proposed dual carriageway.

11.3.1. Tweefontein Padstal

Tweefontein Padstal is a charming and atmospheric farm store located approximately a mere 30 metres from the N1 northbound, on the west side of the freeway. It is located at the coordinates, 33°36'22.41"S, 19°30'31.16"E.

This brick building was clearly used as part of farm activities in the past. According to Hester Nordeé, the owner of the store, and of Tweefontein Farm, she had owned the building for 30 years. Previous to this it was used as horse stables, and before this it was a wine cellar. The building is almost certainly older than 60 years of age.

It appears as if the building has been modified at some point in its history as the front and back walls are not thick, as one would expect in a historic structure. The walls are of lime plaster; the ceiling is constructed from old wood, probably oak, and there is also a section of the ceiling that is constructed from reeds. This section could possibly cover an opening at the time of when the building was used as a stable, as it was common in the 1800's for horse feed and tack to be kept above the stables.

The old wood ceiling could very well be part of the original ceiling of the building. It is stained and weathered in certain sections. The windows appear to be the original windows of the building, most likely dating to the mid-1800's, or before. The pergola at the front of the building is a new addition, and this falls in line with the history of the building having been, at certain points, a stable and a cellar, when it would have been without the pergola. The double door at the front of the building is also possibly a new addition, but the doors are in line with those that are typical of a stable. The door hinges, however, appear to be more recent. The screed floor appears to have been laid on top of an older original floor.

The padstal is a cultural feature on this landscape. It (and others) lends character to the landscape, and it (and others) has grown out of the Cultural Landscape of which it is itself an expression. It is the opinion of the author of this report that the building should be retained and protected, as it also forms part of the Living Landscape of the area, offering a service and adding cultural quality of experience to visitors and residents, alike. This form of cultural expression, as Living Heritage, is typical of this region. These cultural country / rural stores (often ethnically Afrikaans-owned) are significant features in the region, and because of all of these above factors the author would ascribe a high grade to the store (for its historicity, and its aspect as part of a Living and Cultural Landscape). There is also the social factor in that it serves a purpose to the public and provides an income to the owner and employees.

Furthermore, further to the front (east) of the store (approximately 10 metres from the store, and 23 metres from the N1) is a small canal along which fresh, clean and clear water runs. It is obvious that this is an old feature, certainly more than 60 years of age that may have been modified over the years. It would appear that it formed part of the original farm, most likely serving as an irrigation ditch. This is a heritage feature, and together with the farm stall, these

two features, and the space they occupy, should be afforded the high grading of Local Grade IIIA. They are of high significance locally, and should be retained as a Cultural and Living Heritage site. The implementation of the proposed development, as Options 1 or 2, will destroy the irrigation ditch, and also alter the essence of the store, if not lead to its ruin / demication. If the development, as Options 1 and 2, is to proceed, as planned, then some sort of mitigation should be made to retain this section of the road as it is at present. Certainly, if the proposed development, as these options, is to proceed then a Phase II Built Heritage Assessment is advised.



Figure 18. Google Earth imagery of Tweefontein Padstal (within the yellow polygon, and indicated by the yellow arrow).



Figure 19. Tweefontein Padstal is set right up against the dramatic backdrop of mountains. The store is indicated by the yellow arrow, while the irrigation ditch line is indicated by the light orange arrow. Google Earth.



Figure 20. This Google Earth imagery provides detail on the form of the building, and a clear view of the irrigation ditch. The store is indicated by the yellow arrow, while the irrigation ditch line is indicated by the light orange arrow. Google Earth.



Photo 42. Tweefontein Padstal, lying about 30 metres to the west of the N1, has much charm and atmosphere. Photo: Sian Hall.



Photo 43. Tweefontein Padstal is located in a dramatic setting with the backdrop of the mountains behind. It is as high quality store, and emits a sense of deep culture outside, and upon entering the interior. Photo: Sian Hall.



Photo 44. These farm stalls are a set feature within the culture-scape of this region. They are typical of the cultural expression of the area, and they serve a very real purpose, providing goods of deep Afrikaans cultural origin to visitors and locals, alike. Photo: Sian Hall.



Photo 45. The doors of the store may be a later addition to the building. They are, however, in line with the type of doors typically seen on stable buildings. Photo: Adolfo Linares.



Photo 46. The hinges of the padstal door appear to be relatively recent. Photo: Adolfo Linares.



Photo 47. The windows of the building are original. They date to the mid-1800's, or before. Photo: Adolfo Linares.



Photo 48. A closer view of the windows the building, and their shutters. These are most likely the original windows. Photo: Adolfo Linares.



Photo 49. An interior view of the original windows, and of the reed ceiling. Photo: Adolfo Linares.



Photo 50. A section of the original wooden ceiling, which is quite probably made from Oak. Photo: Adolfo Linares.



Photo 51. The original wooden ceiling of the building is clearly very old, and is much stained and weathered. Photo: Adolfo Linares.



Photo 52. The north wall of the building. Photo: Adolfo Linares.



Photo 53. The southern wall of the building. Photo: Adolfo Linares.



Photo 54. The probable irrigation canal, which is just some 10 metres from the padstal, is clearly an original (irrigation) canal of the working farm to which the farm store is associated. It is only 23 metres from the edge of the road, and as such, it would be obliterated by the proposed development, should Option 1 or 2 go ahead. The ditch must date to the 1800's, if not before, and it should be retained as a heritage feature. Photo: Sian Hall.



Photo 55. Clear water runs along the irrigation canal, and it has been made into a charming feature for visitors to cross before approaching the padstal. This entire space has become something of a cultural experience. Photo: Sian Hall.



Figure 21. This figure shows the flow of water from the high mountains, down the valleys and into the Hex River. The pale orange arrows indicate the possible source of the water which drains into the irrigation ditch, and the path of flow of the irrigation ditch. The water may also originate from the close-by Hex River via an underground source. Source: Google Earth.

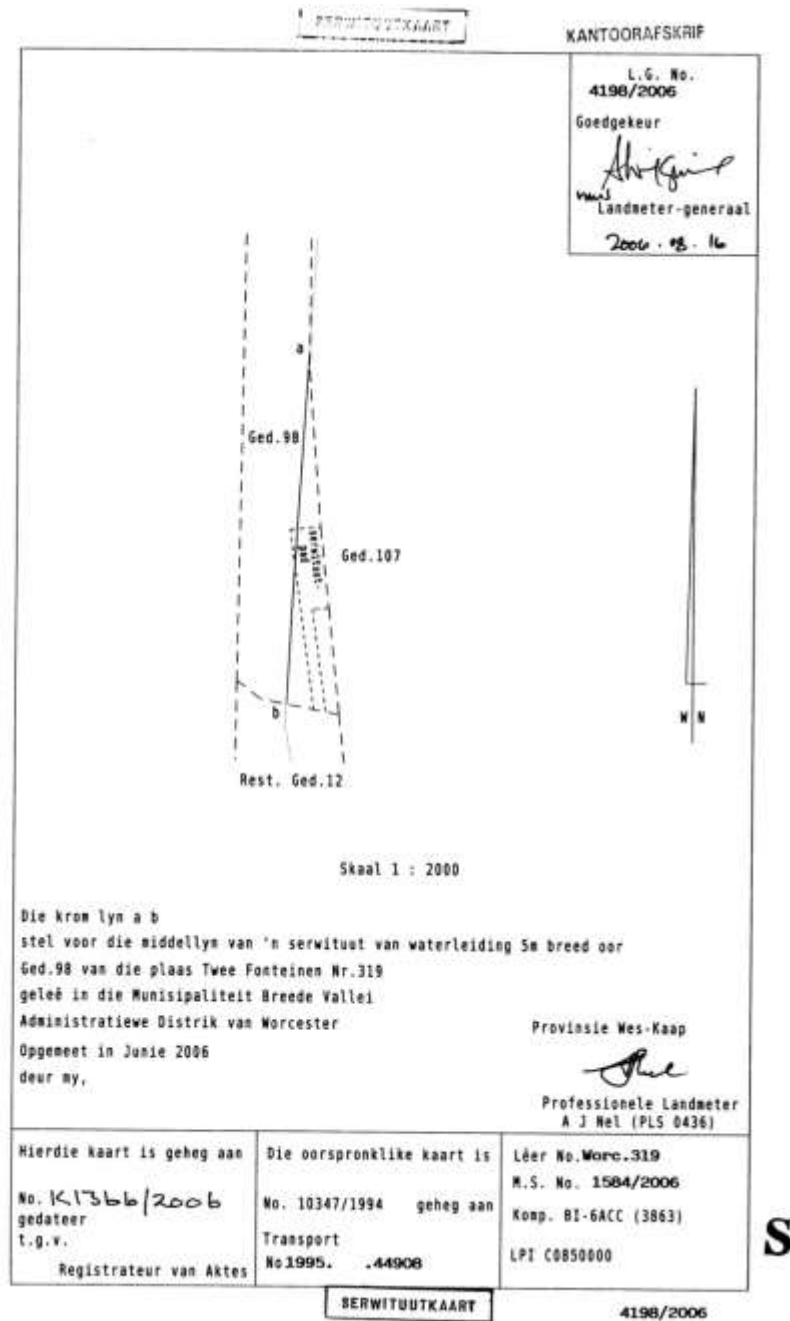


Figure 22. Surveyors diagram for the Farm Tweefontein.

SYE METER		RIGTINGS- HOEKE		KOÖRDINATE STELSEL Lo 19°	
		<i>Konstante</i>		Y	X
				±	0,00
					+3700 000,00
AB	31,80	260	04 10	A	- 47 267,81 + 19 512,32
BC	53,53	5	19 10	B	- 47 299,13 + 19 506,84
CD	152,93	0	16 00	C	- 47 294,17 + 19 560,13
DE	70,33	355	35 40	D	- 47 293,46 + 19 713,06
EF	36,34	353	58 10	E	- 47 298,86 + 19 783,18
FG	47,97	354	14 00	F	- 47 302,68 + 19 819,32
GH	34,75	101	20 40	G	- 47 307,50 + 19 867,05
HT	12,73	128	16 20	H	- 47 273,43 + 19 860,21
JA	340,04	180	44 10	J	- 47 263,43 + 19 852,33
<i>Serwituutgegeewens</i>					
Fm	6,99	85	55 20		
mn	46,52	352	22 40	m	- 47 295,71 + 19 819,81
np	5,29	101	20 50	n	- 47 301,88 + 19 865,92
pp	81,55	172	22 40	p	- 47 296,69 + 19 864,88
qE	13,01	266	09 00	q	- 47 285,88 + 19 784,05
Gn	5,73	101	20 50		
Nr.142 Keurhoek				▲	- 48 055,32 + 12 174,81
Nr.162 Rabiesberg				▲	- 60 480,61 + 20 246,71
<i>Beskrywing van Bakens</i>					
A = swaar ysterhoekpaal.					
B, G, H, J, m, n, q = 20mm. ysterpen.					
C, D, E, F, p = Houthoekpaal in beton.					
<i>Serwituut Notas</i>					
1) Die lyn yz stel voor die middellyn van 'n serwituut betonvoor.					
2) Die figuur EFmnpq stel voor 'n Serwituut pad.					
Die figuur <u>ABCDEFGHJ</u>					
stel voor <u>1,0971 hektaar</u> grond, synde					
<u>Gedeelte 9B 'n gedeelte van gedeelte 12 van die</u>					
<u>plaas Twee Fontein Nr. 319</u>					
geleë in <u>Worcester</u> Administratiewe Distrik					
Provinsie Kaap die Goeie Hoop.					
Opgemeeet in <u>februarie 1958 - November 1994</u>					
deur my, <i>J. Gansu</i>					
(r.s. 0205) <i>J. GANSU</i> Professionele Landmeter					
Hierdie kaart is geheg aan		Die oorspronklike kaart is.		Lêer No. Worc.319	
No. <u>44908/95</u>		No. <u>3079/1906</u> geheg aan		M.S. No. E3441/94	
gedateer		Transport/ <u>Grensbrief</u>		Komp. <u>B1-6ACC (3863)</u>	
t.g.v.		No. <u>1908-8-451</u>			
Registateur van Aktes					
VIR ENDOSEMENTE					

Figure 23. Sur vey documents for Tweefontein Farm.

11.3.2. Cluster of Corrugated Iron Houses

On the East side of the N1, northern section, at the co-ordinates, 33°36'6.19"S, 19°30'35.48"E, are a cluster of six houses, and associated structures, built from corrugated iron, or brick with corrugated roofs. These are clearly not high income housing. On an initial survey, such as this, it is difficult to tell their date off-hand, but they may date from varying periods.

The steel windows of the corrugated structures were made in South Africa during the 1970's, while the corrugated sheets from which the house is constructed are possibly much older material that was brought in by the British after the second British occupation¹³, as corrugated iron houses became more popular then. Corrugated Iron Sheet factories were well established in Britain by the 1840's. This was because of the great fires that swept through certain towns, including Stellenbosch, partly due to the number of thatched buildings in these towns. In order to ascertain whether the material is, in fact, historic, one would need to search the sheets for stamp marks from British factories indicating this. The length of the sheets would also be indicative of whether they are historic, or more recent.

The distance of the yard, closest to the N1 is 7 meters. The closest structure is approximately 12 meters. If the proposed development, as Options 1 and 2, is to proceed, these buildings, structures, and their occupants are going to be severely negatively affected. In fact, the structures will most likely be obliterated. If the development (as Options 1 and 2) is to proceed then it is suggested that a Phase II Built Heritage Assessment be conducted.

¹³ Sometime after 1806, after the Battle of Blaauwberg.



Photo 56. These buildings are built from corrugated Iron sheeting. The length of the sheets, from a distance, appears to be long, but this can only be confirmed on a closer inspection, during a more detailed Built Heritage study. It is quite possible that the material has been reused from an older structure, to build this one. The dates of the buildings are unknown, and can only be discovered during a more detailed study. Photo: Sian Hall.



Photo 57. The structures in the foreground are only 7 meters from the N1 freeway. They are built from corrugated sheeting. The structures would be obliterated by the proposed development. The steel windows of the building appear to be a later feature, having been available in South Africa during the 1970's. This photo, taken a little further to the south of the property show, in the background, the valleys and wide open avenues along which colluvium could move down with high velocity water. Photo: Sian Hall.



Photo 58. A closer look at the structure that lays closest to the verge of the N1, at a distance of about 7 meters. Photos: Sian Hall.



Photo 59. Another of the houses, set further back from the road than the first, but which yard still lays very close to the N1. Photo: Sian Hall.



Photo 60. A closer look at the same house reveals, that it too, is built from corrugated iron sheeting. There appear to be a good number of people living in this cluster of dwellings, as some of the houses have been sub-divided to accommodate additional families. Photo: Sian Hall.



Photo 61. The date of these structures is unknown. A detailed study would be required to ascertain their date and their significance. It is obvious though, that this cluster of houses form a community, and that the proposed freeway (as Options 1 and 2) would be very disruptive, as the residents would lose their houses and would have to be accommodated elsewhere. What they would be paid-out for their houses may not be sufficient for them to purchase something as well-suited to their individual requirements. In addition, their community networks of mutual dependence may also be impacted. It could be that extended families live in these houses. Photo: Sian Hall.



Photo 62. A brick house, further to the south of the houses in the previous photos, but still tightly grouped with the cluster of buildings. The date of the house is uncertain. It is possible that it is over 60 years of age, but it is possibly built in the 1970's. Photo: Sian Hall.



Photo 63. This same house (one of the furthest from the N1) is still very close to it at just over 12 meters. The author is standing on the N1 shoulder to take the photograph. Photo: Sian Hall.



Figure 24. Google Earth imagery of the above house. Its yard boundary still lies very close to the N1, just 10 meters from it. Photo: Sian Hall.



Photo 64. A house belonging to this cluster, but set further back from the N1 than the others. Photo: Sian Hall.

11.3.3. Uitvlucht Guest House, Worcester

Uitvlucht Guest House is claimed by the owners on their website to be the only guest house that is a national Monument, in the area. The building dates from 1824. It is registered as a Provincial Heritage Monument, and as such, is afforded a high Grading of Grade II.

The following information is available from the SAHRIS website. The building is registered as Uitvlucht 310, Worcester District. The site reference is 9/2/110/0018. It is declared as a Provincial Heritage Site. Its Gazette Date is Friday, October 4, 1996. Its Notice Number is 1584. Its Archive Status is a National Monument. The Deed of Transfer is T34992/1990, dated 19 June 1990.

Its Full Description on the SAHRIS Website is:

“The portion of the farm Uitvlucht, together with the historical buildings thereon, bounded by a line running parallel to the buildings so as to include a rectangular area, consisting of a line stretching five meters east of the stables, ten meters north of the side of the main house, five meters west of the south-western wall of the wine cellar and ten meters south of the south-eastern wall of the wine cellar, situated in its entirety on Portion 9 (a portion of Portion 1) of the farm Uitvlucht 310, in the Administrative District of Worcester.”

This building, its associated structures, and associated spatial area (as described in the SAHRIS registration) cannot be disturbed in any way during the construction of the proposed development, and a distance of at least 50 meters must be kept from its property boundary.



Figure 25. The proximity of Uitvlucht Guest House to the Proposed Option 2. The road would impact upon the established property of the National Monument. The main building of the National Monument is indicated by the yellow arrow, while the various buildings associated with it are encircled by the yellow polygon. Google Earth.

11.4. Cultural Landscape, Living Landscape, and Scenic Beauty

Worcester falls within the Cape Winelands Magisterial District. The Cape Winelands constitutes a Historical, Cultural and Living Landscape. Worcester is also one of the oldest towns in the Cape Province, and it is also one of the most intact regarding the preservation of its original buildings. Worcester has historic buildings of varying ages and significances, within its town centre, its residential areas, on its outskirts, and on the farms surrounding it.

Worcester also has a surprising number of thatched historic buildings from a very early period. Unlike Stellenbosch and Tulbagh, this is because it never experienced a great conflagration during the early years of occupancy, when many thatched buildings in these two towns burnt down. In addition to the buildings there are also other associated features reflecting historic

human activity, such as irrigation ditches on farms, or the way in which space is used within the town. The area is therefore, largely, a historic Culture-scape filled with the material and cultural expression of the European Settler and British occupancy. It is a Culture-scape that is worthy of recognition and preservation.

As a Living Landscape, the area presents social and cultural expression as an ongoing continuum of prescribed human activity that persists from the deepest part of European occupancy of the Cape to the present time. This takes the form of farming practices, the production of wines, liquors; a distinct amalgamation of Cape, Malay, French and Dutch cuisine that has become synonymous with this part of the world. The padstals are an expression of this type.

The historic Cape Dutch guest house forms another category of historic and cultural expression, which is unique to this landscape, as Historic Dutch Guest Houses. In addition, historic guesthouses have also become synonymous with the Cultural Landscape, and guests expect to experience something of the history and culture of the region when they stay in such places. Guests from Europe can immediately relate to such places as they are reminiscent of a persistent historic European culture transposed into the African context.

Uitvlucht Guest House is a historic building of significance, and is a Provincial Heritage Site, which affords it a Grade II Provincial Heritage Grading. This is a very high grading and marks it as one of the most significant heritage buildings in the province. It must not be impacted in any way by the proposed development.

Then there is a presence of Middle Stone Age (most prevalent), and Early Stone Age sites which characterise the area. These are industries ascribed to early man, or hominids. To a lesser degree there are Late Stone Sites which are ascribed to San Hunter Gatherers, and Khoekhoe herders.

All of the above weave the tapestry of this unique Cultural and Living Landscape. They should all be regarded in a combined manner when considering any proposed development which may impact upon this Cultural Landscape, in part, or as a whole, since each aspect defines the whole.



Photo 65. Photo depicting the scenic beauty of the area. This photo was taken on the northern section of the N1 development footprint, facing north. Photo: Sian Hall.



Photo 66. This photo depicts something of the scenic beauty of the area, and of the historic farming practice of wine production. This vineyard is located on the level areas adjacent to the N1 development footprint. Photo: Sian Hall.

11.5. Graves

No graves were observed during the field work survey. However, the following should be observed, should any graves be encountered during the operational phase of the proposed project.

Graves are graded as having a high (3A) local significance. Section 36 (3) (a), states that:

(3)(a) No person may, without a permit issued by SAHRA or a provincial heritage resources authority—

- (a) destroy, damage, alter, exhume or remove from its original position or otherwise disturb the grave of a victim of conflict, or any burial ground

- or part thereof which contains such graves;
- (b) destroy, damage, alter, exhume, remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority; or
 - (c) bring onto or use at a burial ground or grave referred to in paragraph (a) or (b) any excavation equipment, or any equipment which assists in the detection or recovery of metals.

Any hidden, or other visible, graves encountered must be immediately reported to the provincial / national heritage authority, and all development work must cease until a heritage official has investigated the graves / burial grounds, and further direction is given by the heritage authority. Enquires must be made to contact the family members of any identified graves regarding the protection of these graves.

With such a high significance, all graves must be protected throughout the operational phase of the project. Graves and burial grounds should be fenced off during construction work, with a gate installed for family members to access. A 20 meter buffer is required around any graves. These requirements must be incorporated into the Environmental Management Plan for the proposed project.

Should any graves or burials be encountered during the construction process, please refer to Appendix 1 of this document.

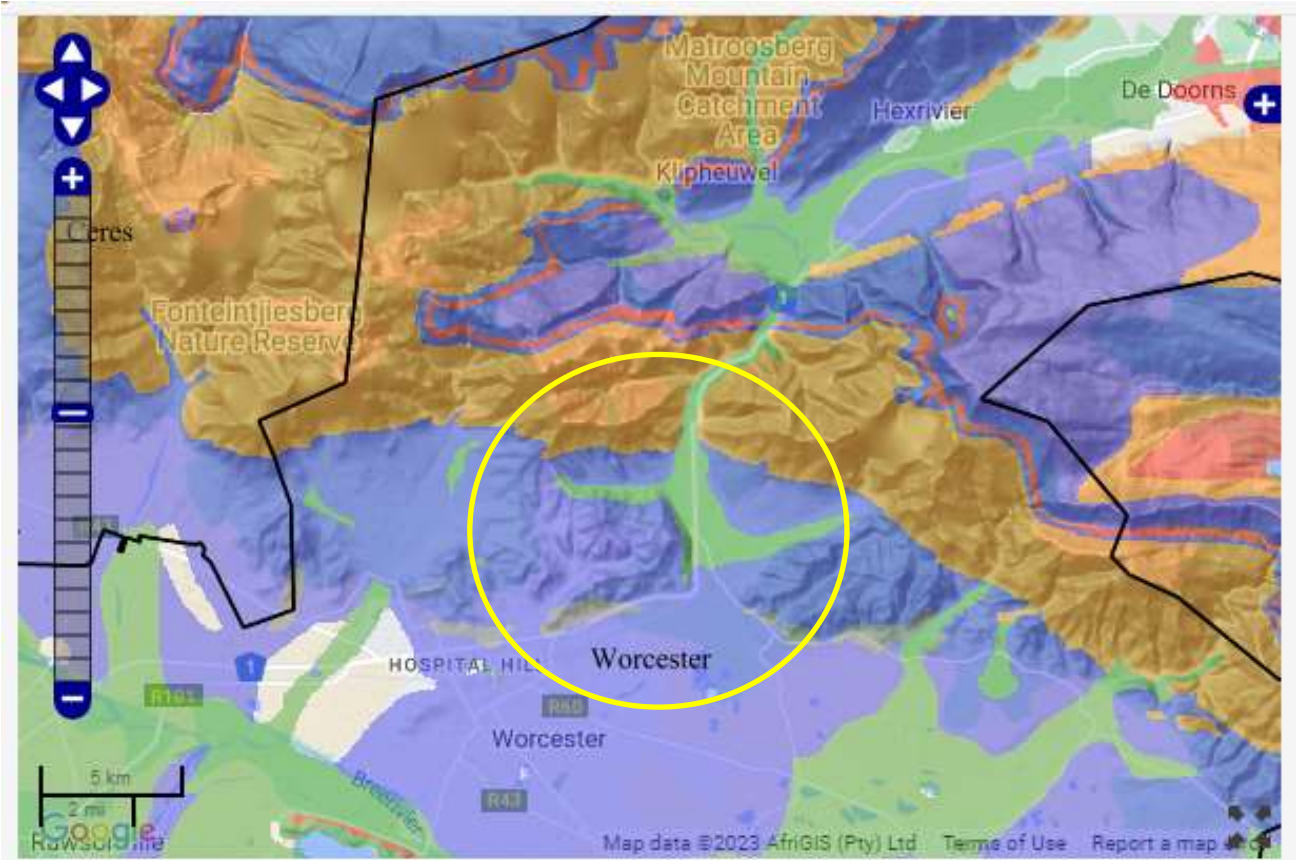
12. Palaeontological Analysis

This Phase 1 Palaeontological Analysis is conducted as per the requirements of Section 38 of the National Heritage Resources Act (Act 5, of 1999).

The Palaeo-significance Overlay Map borrowed from SAHRIS (South African Heritage Resources Information System) official website indicates that the study footprint is split between both a blue and green zone. The green zone indicates a moderate sensitivity for paleontological fossil presence, indicating the necessity of a further desktop analysis by a registered palaeontologist. The blue zone indicates a low likelihood for the presence of palaeontological fossils. No further investigation is required for this zone, but a find protocol is called for, stating that any finds of fossils should halt all development work, and that Heritage Western Cape be informed. Any further actions must depend upon its findings. Ultimately, a further desktop palaeontological analysis will have to be conducted by a registered palaeontologist. Attention is, once again,

brought to the requirement that, should any palaeontological features be uncovered during development, all work must immediately cease, and the provincial heritage authority must be notified, without delay.

Should any fossil finds be encountered during the construction process, please refer to Appendix 3 of this document.



Colour	Sensitivity	Required Action
RED	VERY HIGH	field assessment and protocol for finds is required
ORANGE/YELLOW	HIGH	desktop study is required and based on the outcome of the desktop study, a field assessment is likely
GREEN	MODERATE	desktop study is required
BLUE	LOW	no palaeontological studies are required however a protocol for finds is required
GREY	INSIGNIFICANT/ZERO	no palaeontological studies are required
WHITE/CLEAR	UNKNOWN	these areas will require a minimum of a desktop study. As more information comes to light, SAHRA will continue to populate the map.

Figure 26. The SAHRIS Palaeontological map indicating the palaeo-significance of study footprint location. It comprises both a blue and a green zones for the incidence of fossil finds. The green colour indicates moderate sensitivity for fossil finds, necessitating that a desktop analysis be conducted by a registered palaeontologist, while the blue zone denotes low significance for fossil finds, but comes with a “finds protocol” The study footprint is incorporated into the yellow polygon. Source: SAHRIS.

13. Field Gradings of Observed Heritage Resources During the Field Survey

The following Table 2 indicates the known, observed, and possible incidences of various heritage resources within, and close to the proposed development footprints.

TABLE 2. PRESENTING THE PRESENCE AND LIKELY INCIDENCE OF PREHISTORIC, HISTORIC AND HERITAGE FEATURES BOTH WITHIN THE STUDY FOOTPRINTS AND WITHIN 50 METERS OF THE STUDY FOOTPRINTS

Table 1. Heritage features and likelihood of incidence			
Type of Heritage Feature	Degree of Incidence	Within Footprint, or Degree of Likelihood within Footprint	Within 50 meter radius of footprint
EIA Acheulian assemblages and scatters (unprovenanced)	Abundant examples of unprovenanced industrial debris, such as cores and flakes.	Abundantly present in Options 1 and 2	High likelihood that there are additional scatters, and terraces
Middle Stone Age assemblages and scatters (unprovenanced)	Possible	Possible	Possible
Late Stone Age assemblages and scatters (unprovenanced)	Present. One crystal quartz lithic	Present, and possible that there are additional examples. Present in Options 1 and 2.	Possible
Khoekhoe Herder Camp	Unlikely	No	Unlikely
San Rock Art	Possible	No	Unlikely
Possible Prehistoric Khoisan footpaths	Possible	Unknown	Unknown
Khoikhoi dwelling traces	Possible	Low likelihood	Unknown

Graves	Not observed	No	Low likelihood
Historic structures or foundations	Present. Buildings and Historic Irrigation Channels	Present in Options 1 and 2.	Present
Historic middens	Possible	Not observed	Possible
Historic irrigation channels	Present	Present in Options 1 and 2.	Present
Oral history and mythology	Present	Present in Options 1 and 2.	
Battle sites	No	No	No
Iron Age	No	No	No
Cultural Landscape	Present	Present	Present
Living landscape	Present	Present	Present
Fossils	Low to medium likelihood	Low to medium likelihood	Low to medium likelihood

TABLE 3. VARIOUS KNOWN HERITAGE INDICATORS PRESENT ON THE PREFERRED CULTIVATION AREA (CULTIVATION AREA 1)

Heritage Indicator	Historic	Aesthetic	Scientific	Social	Rarity	Representivity
EIA Acheulian assemblages and scatters (unprovenanced)	Yes	No	Yes	No	No	Yes
Middle Stone Age assemblages and scatters (unprovenanced)	Yes	No	Yes	No	No	Yes
Late Stone Age	Yes	No	Yes	No	Yes	Yes
Historic Canals	Yes	Yes	Yes	Yes	Yes	Yes
Historic structures or foundations	Yes	Yes	Yes	Yes	No	Yes
Cultural Landscape	Yes	Yes	Yes	Yes	Yes	Yes
Living Landscape	Yes	Yes	Yes	Yes	No	Yes

The following table provides the various ratings of heritage resources, following the guidelines as outlined by SAHRA. These ratings will guide the ratings of significance of the heritage resources and indicators present on the study footprints.

TABLE 4. FIELD RATING AND RECOMMENDED GRADING TABLE OF HERITAGE INDICATORS (BASED UPON FIELD RATING AND GRADING TABLE, SAHRA, 2005).

Level	Details	Action
National (Grade I)	The site is considered to be of National Significance	Nominated to be declared by SAHRA
Provincial (Grade II)	This site is considered to be of Provincial significance	Nominated to be declared by Provincial Heritage Authority
Local Grade IIIA	This site is considered to be of HIGH significance locally	The site should be retained as a heritage site
Local Grade IIIB	This site is considered to be of HIGH significance locally	The site should be mitigated, and part retained as a heritage site
Generally Protected A	High to medium significance	Mitigation necessary before destruction
Generally Protected B	Medium significance	The site needs to be recorded before destruction
Generally Protected C	Low significance	No further recording is required before destruction

The following Table 5 attributes Field Gradings to the Known Heritage Features and Sites within, or close to the Proposed Study Footprint

TABLE 5. FIELD GRADING ATTRIBUTED TO THE VARIOUS HERITAGE FEATURES AND SITES WITHIN, OR CLOSE TO THE PROPOSED STUDY FOOTPRINT

Heritage Indicator	Level	Details	Action	GPS Co-ordinates
EIA Acheulian assemblages and scatters (unprovenanced)	Grade IIIC	Low significance	Even though a low significance has been afforded to this site, mitigation is necessary before destruction	33°36'6.47"S, 19°30'32.56"E
Middle Stone Age assemblages and scatters (unprovenanced)	Grade IIIC	Low significance	Even though a low significance has been afforded to this site, mitigation is necessary before destruction	33°36'6.47"S, 19°30'32.56"E
Historic Canals	Local Grade IIIA	This site is considered to be of HIGH significance locally	The site should be retained as a heritage site	33°36'22.41"S, 19°30'31.16"E.
Twefontein Padstal	Local Grade IIIA	This site is considered to	The site should be retained as a heritage	33°36'22.41"S, 19°30'31.16"E.

		be of HIGH significance locally	site	
The Cluster of Houses off the N1	Grade IIIC	Low heritage significance, but of high social significance since they are inhabited	Mitigation necessary before destruction	33°36'6.19"S, 19°30'35.48"E
Uitvlucht Guest House	Provincial Grade II	This site is considered to be of Provincial significance	Declared by Provincial Heritage Authority	
Cultural Landscape for this Area	Provincial (Grade II)	This site is considered to be of Provincial significance	Nominated to be declared by Provincial Heritage Authority	
Living Landscape for this Area	Provincial (Grade II)	This site is considered to be of Provincial significance	Nominated to be declared by Provincial Heritage Authority	

14. The National Heritage Resources Act as applicable to Heritage Features identified on the Study Footprints

The National Heritage Resources Act (NHRA)(Definitions, section 2(v) the significance of heritage sites and artifacts, is determined by aesthetic, historical, scientific, social, spiritual, linguistic or technical value in relation to the uniqueness, condition of preservation, and research potential of each indicator. These significances have been discussed earlier in this report, and the significances of these historic and heritage features and indicators assessed using various relevant heritage criteria, have been presented. These findings have contributed to the conclusions reached in this section of the report.

The primary clauses of the NHRA that has triggered the request for this Basic Heritage Impact Assessment are:

- With reference specifically to the proposed linear footprint, Section 38 (1)(c)(i), which states that:

38.(1) Subject to the provisions of subsections (7), (8) and (9), any person who

intends to undertake a development categorised as—

- (a) **the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;**
- But with references to the surrounding Cultural and Living landscape, it would be:
 - Section 38 (1)(c)(i), which states that:

“...any person who intends to undertake a development categorised as—**any development or other activity that will change the character of a site – exceeding 5000m² in extent...**”.

The National Heritage Resources Act (NHRA) is very clear about the identification, recording and management of any heritage resources encountered during planned developments and heritage impact assessments. All heritage resources are afforded either Formal, or General Heritage Protection. Pertaining to this particular report are General Protections, as follows:

NHRA Part 2: General Protections,

34. Structures

34. (1) *No person may alter or demolish any structure or part of a structure which is older than 60 years without a permit issued by the relevant provincial heritage resources authority.*

35. Archaeology, palaeontology and meteorites

35. (1) *Subject to the provisions of section 8, the protection of archaeological and palaeontological sites and material and meteorites are the responsibility of a provincial heritage resources authority:*

(2) *Subject to the provisions of subsection (8)(a), all archaeological objects, palaeontological material and meteorites are the property of the State. The responsible heritage authority must, on behalf of the State, at its discretion ensure that such objects are lodged with a museum or other public institution that has a collection policy acceptable to the heritage resources authority and may in so doing establish such terms and conditions as it sees fit for the conservation of such objects.*

(3) *Any person who discovers archaeological or palaeontological objects or material*

or a meteorite in the course of development or agricultural activity must immediately report the find to the responsible heritage resources authority, or to the nearest local authority offices or museum, which must immediately notify such heritage resources authority.

(4) No person may, without a permit issued by the responsible heritage resources authority—

(a) destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or any meteorite;

(b) destroy, damage, excavate, remove from its original position, collect or own any archaeological or palaeontological material or object or any meteorite;

(c) trade in, sell for private gain, export or attempt to export from the Republic any category of archaeological or palaeontological material or object, or any meteorite; or

(d) bring onto or use at an archaeological or palaeontological site any excavation equipment or any equipment which assist in the detection or recovery of metals or archaeological and palaeontological material or objects, or use such equipment for the recovery of meteorites.

Part 2: General Protections,

36. Burial grounds and graves

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

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

(3) (a) *No person may, without a permit issued by SAHRA or a provincial heritage resources authority—*

(a) destroy, damage, alter, exhume or remove from its original position or otherwise disturb the grave of a victim of conflict, or any burial ground or part thereof which contains such graves;

(b) destroy, damage, alter, exhume, remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority;

It must also be noted that all archaeological, heritage, and grave features older than 60 years are protected by National Heritage Legislation, Should any such features or objects be exposed by the developers then all work must stop and a heritage consultant, or the provincial heritage authority, Heritage Western Cape, be contacted for further advice. This direction is encapsulated in the following clauses extracted from the National Heritage Resources Act, under:

Part 2: General Protections,

Section 35(3), Any person who discovers archaeological or palaeontological objects or material or a meteorite in the course of development or agricultural activity must immediately report the find to the responsible heritage resources authority, or to the nearest local authority offices or museum, which must immediately notify such heritage resources authority.

And,

Part 2: General Protections,

Section 36 (6) Subject to the provision of any other law, any person who in the course of development or any other activity discovers the location of a grave, the existence of which was previously unknown, must immediately cease such activity and report the discovery to the responsible heritage resources authority which must, in co-operation with the South African Police Service and in accordance with regulations of the responsible heritage resources authority—

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

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

A Formal Protection is afforded to Uitvlugt Guest House, as a Grade 2 Provincial Heritage Site. This is described in the NHRA Part 1, Section 27(2).

(2) A provincial heritage resources authority must identify those places which have special qualities which make them significant in the context of the province or a

region in terms of the heritage assessment criteria set out in section 3(2) and prescribed under section 6(1) and (2) and must investigate the desirability of their declaration as provincial heritage sites.

15. Conclusions and Recommendations

There are three options provided for this proposed development. Each one will be discussed below, and the conflicts embedded in each option will be highlighted.

15.1. Conflicts

15.1.1. Options 1 and 2

The conflicts encountered on options 1 and 2 are:

Twefontein Padstal

The Twefontein Padstal at GPS co-ordinates, 33°36'22.41"S, 19°30'31.16"E. The original structure of this building dates from the mid-1800's, or earlier. It was originally a cellar. Its activity space also includes an irrigation ditch which water flows southwards from the Hex River, or directly from mountain streams, apparently via an underground source. This heritage site and space has been described at some length in this report.

This report assigns and Grading of Local Grade IIIA, at least. This denotes a High Significance to the site, and indicates that it should be retained as a Heritage Feature. The opinion of this report is that this site, including the irrigation ditch should not be interfered with in any way. It is recommended that a buffer of some 30 meters, at least, be afforded the site.

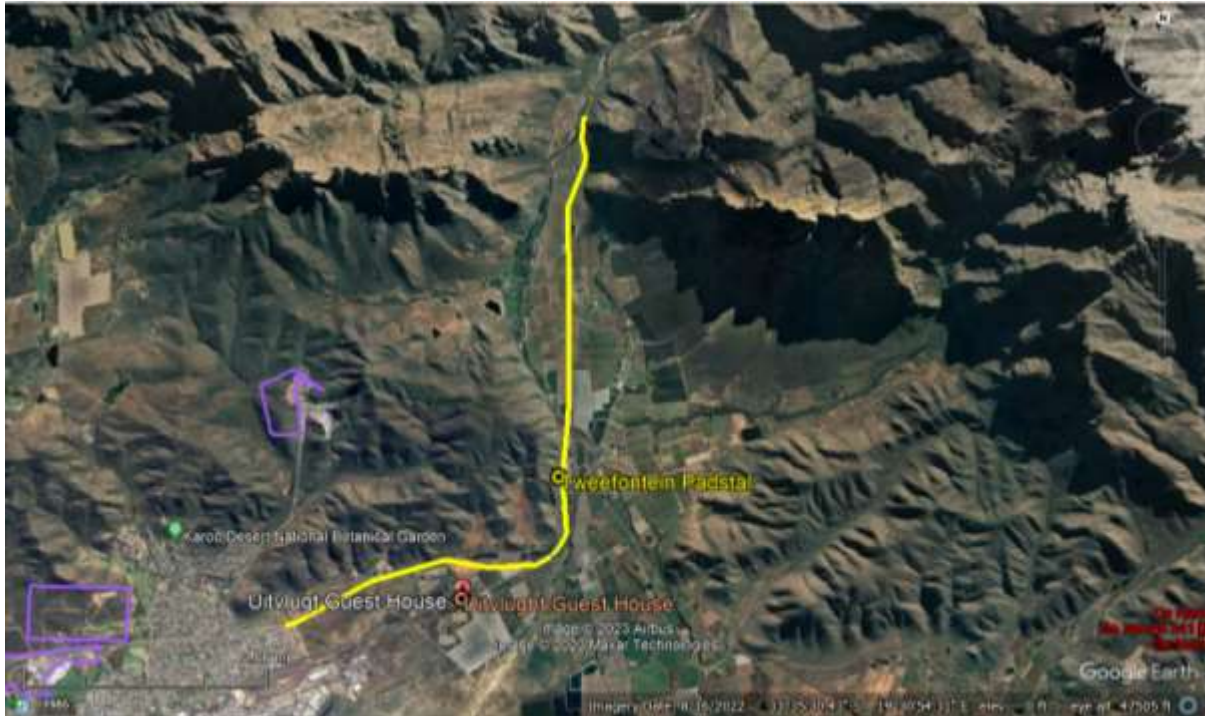


Figure 27. The route proposed by Option 1. The location of Twefontein Padstal is clearly visible in yellow. It is clear that the 50 meter (minimum) width of the proposed dual carriageway will obliterate this heritage space. The location of Uitvlugt Guest House is also visible, indicated by light orange colour. The guest house is not impacted by Option 1. Google Earth.



Figure 28. It is obvious that Twefontein Padstal area will be directly and negatively impacted by both Options 1 and 2, but not by Option 3. Google Earth.

The Cluster of Houses to the East of the N1

The cluster of houses located very close to the east of the N1, as described in this report, will be severely affected by the proposed development Options 1 and 2. The co-ordinates for this sites is at the co-ordinates, 33°36'6.19"S, 19°30'35.48"E. This is a conglomeration of corrugated iron and brick houses of uncertain date. All six houses are inhabited, and this is also of concern since the occupants will be greatly affected by the implementation of the proposed Options 1 and 2, which will obliterate their houses. The closest yard is only 7 meters from the present N1.

This report has given the grade of Grade IIIC, with a low *heritage* rating. This means that there would need to be mitigation before destruction. However, the site has a high *social* significance since the houses are inhabited.

The Cobble Terrace Early Stone Age Archaeological Site

This Early Stone Age archaeological site is located adjacent to the western side of the N1, in the northern section of the proposed development. Its co-ordinates are, 33°36'6.47"S, 19°30'32.56"E. This site has been described above. The site has been graded as General IIIC. It will be completely obliterated by the proposed development. Before the site is interfered with in any way, a specialist Early Stone Age archaeologist should examine it carefully as it may have scientific value.



Figure 29. Both the Early Stone Age cobble terrace archaeological site, to the west of the freeway, and the cluster of houses of uncertain date, located to the east of the freeway, will be severely negatively affected by both proposed Options 1 and 2. Google Earth.

Uitvlucht Guest House

This Provincial Heritage Building, dated to 1824, has a High Formal Grading of Grade 2A. It cannot be disturbed in any way at all. Option 2 will pass very close to the boundary of this property. A buffer of 50 meters, at least, should be kept from the boundary.



Figure 30. Option 2 (indicated by the light orange arrow) will pass too closely to the boundaries of the Provincial Heritage Site of Uitvlugt Guest House. It is not recommended that this Option be implemented, for this reason, and because it also compromises, Tweefontein Padstal, the Early Iron Age Site, and the cluster of six houses of uncertain date. Google Earth.

15.1.2. Option 3

Option 3 appears to bypass all the sites of concern in this report. This will be explained in the following figures.

Tweefontein Padstal is circumvented by a wide berth. It will not be affected at all, as exemplified in the figure below.



Figure 31. Tweefontein Padstal will not be affected at all by Option 3 (yellow line), as indicated by the light orange arrow. Google Earth.

The **Cluster of six houses of uncertain date** will not be directly affected by Option 3 of the proposed project as there is a distance of 162 meters between the houses and the yellow line indicating Option 3. This is shown in the figure below. Additionally, the **Cobble Terrace of Early Stone Age lithics** will also be unaffected.

The only concern with Option 3 is the impact that it could have on the Old World Settler Cape character of this Cultural Landscape.

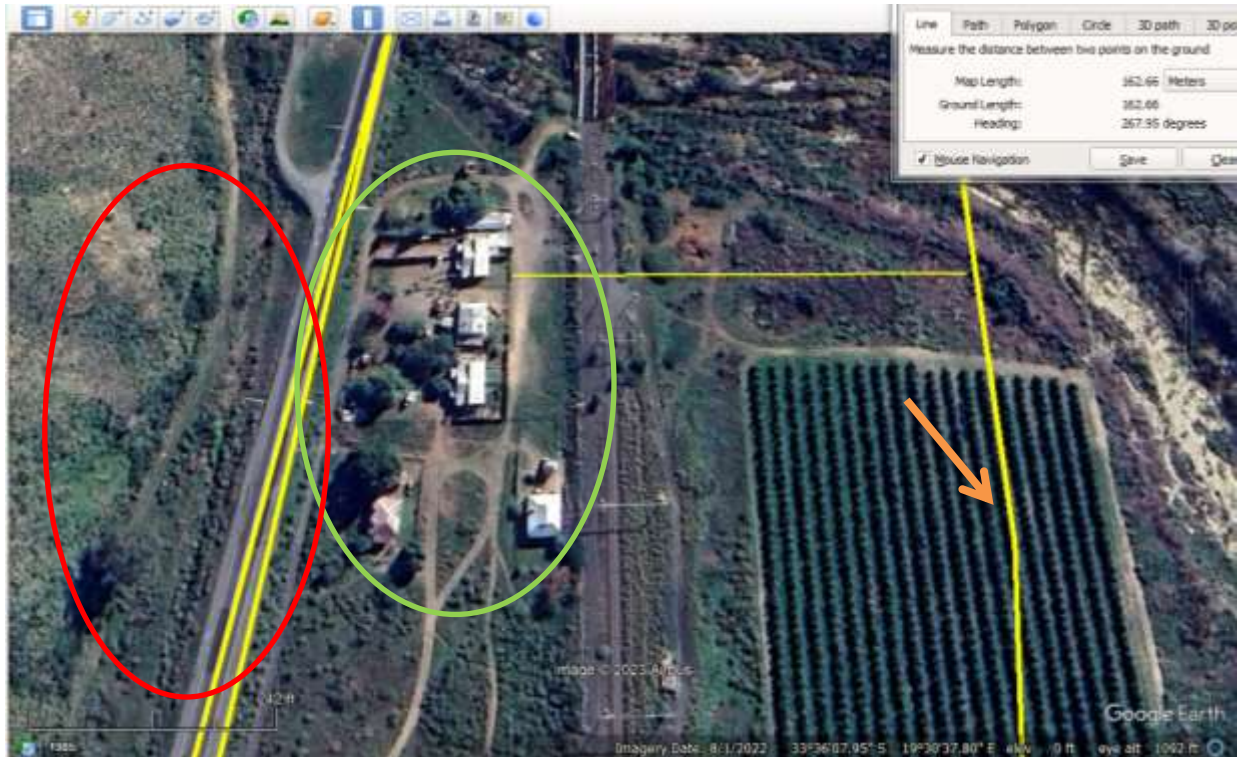


Figure 32. The cluster of houses is indicated by the green polygon. Option 3 is indicated by the light orange arrow. The Early Stone Age site will also not be affected by Option 3 (indicated by the red polygon). Google Earth.



Figure 33. Uitvlught Guest House will not be affected by Option 3, indicated by the orange arrow. Google Earth.

15.1.3. Summary of Conflicts

Conflicts of Option 1:

- Tweefontein Padstal
- Historic Irrigation Channel
- Early Stone Age Site
- Cluster of Houses

Conflicts of Option 2:

- Tweefontein Padstal
- Historic Irrigation Channel
- Early Stone Age Site
- Cluster of Houses
- Uitvlught Guest House

Conflicts of Option 3:

- No actual conflicts
- Concern regarding the negative impact upon the character of the Cultural Landscape

16. Recommendations

The study area was surveyed on the 27th March 2023. There are three implementation options for the proposed development. The option with the least degree of impact is Option 3. Nevertheless, that option has the potential to impact negatively old upon the Old World unique Settler character of the area. Options 1 and 2 will directly impact upon existing heritage features, discussed at length above, as well as upon the Sense of Place of the area.

Unprovenanced, and perhaps in situ, lithic stone tool scatters could possibly be encountered during the operational phase of the development. These stone tools may erode from the landscape, be uncovered during construction, or they may just lie scattered on the ground. Development team leaders and workers need to be versed by an appointed CLO / ELO, or a heritage officer, as to what these stone tools look like. Any CLO / ELO must be familiarized with possible heritage features and objects during an orientation process to be arranged by the provincial heritage authority. Any evidence of stone tools, burials, or any archaeological material, must halt further works and the provincial heritage authority is notified, possibly through a Community Liaison Officer, Environmental Liaison Officer, or directly.

In point form:

1. The incidence of any scattered, or unprovenanced artefacts, of any kind, should be reported to the CLO / ELO, who in turn will report the incidence to HWC (Heritage Western Cape), and they should not be disturbed in any way, or to be moved.
2. Any archaeological, or historical sites uncovered during construction should similarly be reported.
3. Where historical or archaeological sites, or graves, are concerned on either side of the study pathway, some accommodation may be required concerning buffer zones stipulated by the NHRA .
4. Heritage Best Practice asks for a 20 meter buffer zone around any artefacts, or sites, protected under General Protections, or Special / Formal Protections.

5. Where a 20 meter buffer is impossible to implement, it is then suggested that a buffer of no less than 5 meters be implemented, but only after inspection by a heritage officer, and with permission being granted by HWC.
6. It is suggested that unmarked graves < 5m from the road reserve should be the responsibility of the appointed CLO / ECO (if appointed) and the appended Chance Find protocol (Appendix 2 of this document) adhered to. During fieldwork no visible graves were observed.
7. Impacts on any unnoticed discrete in situ archaeological material is professionally considered to be possible.
8. The identity of any graves encountered during the operation phase should be recorded and presented to the provincial heritage authority.
9. Any structures encountered during development should ideally be afforded a 20 meter buffer zone, however, where this is impossible then a 10 meter zone, at least, should be kept.
10. A CLO / ELO should possibly be employed to inform the community about the development in general, and about particulars regarding protection of the sensitive artefacts, features, structures and spaces, as described in this report. Such officers should also be used to inquire from the community information about archaeological, or historic features, and about graves that may be present in the area.
11. An induction event by a registered heritage practitioner, sub-consulted by Heritage Western Cape, or by a Heritage Western Cape officer, should take place in order to inform and educate the CLO / ELO and community about these matters.
12. Any activity associated with the proposed development must be conducted in a manner that will avoid any interference with homesteads, businesses and their associated features. It is also recommended in this report that the workforce be primed not to interfere with the community in such manner as to become intrusive, invasive, or to influence members of the community in any way against their will.
13. It would be advisable for HWC to consider an appointed heritage officer / practitioner to be present during construction close to sensitive features, such as the Early Stone Age site, the Padstal and associated canal, referred to in this report, if that becomes necessary. It would not be necessary under Option 3.

Attention is drawn to the South African Heritage Resources Act, 1999 (Act No. 25 of 1999) which requires that operations that expose archaeological or historical remains, including potential grave sites, should cease immediately, pending evaluation by the provincial heritage agency.

No graves have been observed during fieldwork. However, should any graves, or human remains, be uncovered during development work then all work must cease and Heritage Western Cape must be notified. No work can continue until the direction comes from Heritage Western Cape. The same direction applies to any archaeological or fossil remains, structures, or objects which may be discovered during construction. Attention is once again drawn to the National Heritage Resources Act, 1999 (Act No. 25 of 1999) which requires that operations that expose archaeological or historical remains should cease immediately, pending evaluation by the provincial heritage resources authority.

Appendix 1. provides the developer and heritage consultants with the official protocol to follow should graves be uncovered within the study area.

Appendix 2. provides the developer and heritage consultants with the official protocol to follow should Chance Finds be uncovered within the study area.

Appendix 3. provides the developer and heritage consultants with the official protocol to follow should Palaeontological fossils be uncovered within the study area.

In relation to actual physical features, objects and structures, it is the opinion put forward in this report that the proposed development may go ahead as planned, if the guidelines presented within this report are adhered to, and if Option 3 is implemented. This does not apply to Options 1 and 2. Regarding the impact of any development of this category on the surrounding Cultural Landscape, it is incumbent upon Heritage Western Cape to make the final decision regarding the impact of a dual carriageway upon this quiet, historic, Cultural Landscape of high distinctive character.

17. Thanks

Thanks to Adolfo Linaeres, and Len van Schalkwyk for helpful comments during the writing of this report. And thanks to Adolfo Linaeres for accompanying the author of the field survey of this project.

18. References

Brooke Simons, P. 1987. *A Concise Guide to Cape Dutch Houses*. Cape Town: C. Struik.

Kaplan, J.M. October, 2006. *Phase 1 Archaeological Impact Assessment, Proposed Development Worcester Hills (Portion of Remainder of Erf 18798), Worcester, Western Cape Province. ACRM (Agency for Cultural Resource Management).*

Kaplan, J. 2011. *Heritage Impact Assessment Proposed Development of Agricultural Land on Portion 16 of Farm 112 (Klipbos) Robertson. For Boland Enviro. ACRM.*

Kaplan, J.M. July, 2015. *Case No. 15012613GT0224E. Heritage Impact Assessment, Proposed Clearing of Agricultural Land on Portion 5 of Farm 342 (De Nonna), Worcester, Western Cape. ACRM (Agency for Cultural Resource Management).*

Kaplan, J.M. February, 2021. *Proposed Agricultural Development of Portion 12 of Farm 481 Scherpe Heuwel Near Worcester, Cape Winelands District Municipality, Western Cape. ACRM.*

Mitchell, P. 2002. *The Archaeology of Southern Africa.* Cambridge University Press: Cambridge

Orton, Jason. 5th August 2008. *Heritage Statement for the Proposed Breede Valley Shell Ultra City on Portion 61 of Farm De Mond van Herteebeest Rivier 379, Worcester Magisterial District, Western Cape. Archaeology Contracts Office, Department of Archaeology, UCT.*

Orton, J. 2009. *Archaeological Impact Assessment for the Proposed New Uitspan Substation, Erf 2 Robertson, Robertson Magisterial District, Western Cape. For SHE Cape Environmental.*

Saacks, B. Mrs, History of Robertson.

SAHRA, 2005. *Minimum Standards For The Archaeological And The Palaeontological Components Of Impact Assessment Reports, Draft version 1.4*

Slabbert, P. 2011. *Phase 1 Archaeological Impact Assessment Proposed construction of additional dwelling units & access road, Farm 633, Portion 10 of Farm 273 and Portion 3 of Farm 344, Swellendam, Western Cape. For PHS Consulting.*

Yates, R. 2nd November, 2006. *Archaeological Heritage Survey, Brewelskloof Quarry, A Portion of Erf 3604, Worcester, Western Cape Province: Proposed Extension of Quarry.*

Acts

South African National Heritage Resources Act, 1999 (Act No. 25 of 1999).

Appendix 1. Relocation of Graves.

Burial grounds and graves are dealt with in Article 36 of the NHR Act, no 25 of 1999. Below follows a broad summary of how to deal with grave in the event of proposed development:

- If the graves are younger than 60 years, an undertaker can be contracted to deal with the exhumation and reburial. This will include public participation, organising cemeteries, coffins, etc. They need permits and have their own requirements that must be adhered to.
- If the graves are older than 60 years old or of undetermined age, an archaeologist must be in attendance to assist with the exhumation and documentation of the graves. This is a requirement by law.

Once it has been decided to relocate particular graves, the following steps should be taken:

- All information pertaining to the identification of the graves needs to be documented for the application of a SAHRA permit.
- Notices of the intention to relocate the graves need to be put up at the burial site for a period of 60 days. This should contain information where communities and family members can contact the developer/archaeologist/public-relations officer/undertaker.
- The notices need to be in at least 3 languages, English, and two other languages. This is a requirement by law.
- Notices of the intention needs to be placed in at least two local newspapers and have the same information as the above points. This is a requirement by law.
- Local radio stations can also be used to try contact family members. This is not required by law, but is helpful in trying to contact family members.
- During this time (60 days) a suitable cemetery need to be identified close to the development area or otherwise one specified by the family of the deceased.
- An open day for family members should be arranged after the period of 60 days so that they can gather to discuss the way forward, and to sort out any problems. The developer needs to take the families requirements into account. This is a requirement by law.

- Once the 60 days has passed and all the information from the family members have been received, a permit can be requested from SAHRA. This is a requirement by law.
- Once the permit has been received, the graves may be exhumed and relocated.
- All headstones must be relocated with the graves as well as any items found in the grave.

Legislation pertaining to Graves under NHRA

Burial grounds and graves

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

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

(3) (a) *No person may, without a permit issued by SAHRA or a provincial heritage resources authority—*

(a) destroy, damage, alter, exhume or remove from its original position or otherwise disturb the grave of a victim of conflict, or any burial ground or part thereof which contains such graves;

(b) destroy, damage, alter, exhume, remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority; or

(c) bring onto or use at a burial ground or grave referred to in paragraph (a) or (b) any excavation equipment, or any equipment which assists in the detection or recovery of metals.

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

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

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

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

(6) *Subject to the provision of any other law, any person who in the course of development or any other activity discovers the location of a grave, the existence of which was previously unknown, must immediately cease such activity and report the*

discovery to the responsible heritage resources authority which must, in co-operation with the South African Police Service and in accordance with regulations of the responsible heritage resources authority—

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

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

Appendix 2: Protocol for the Identification, Protection, and Recovery of Heritage Resources

During Construction and Operation

It is possible that sub-surface heritage resources could be encountered during the construction phase of this project. The Environmental Control Officer and all other persons responsible for site management and excavation should be aware that indicators of sub-surface sites could include:

- Ash deposits (unnaturally grey appearance of soil compared to the surrounding substrate);
- Bone concentrations, either animal or human.
- Ceramic fragments, including potsherds.
- Stone concentrations that appear to be formally arranged (may indicate the presence of an underlying burial, or represent building/structural remains); and
- Fossilised remains of fauna and flora, including trees.

In the event that such indicator(s) of heritage resources are identified, the following actions should be taken immediately:

- All construction within a radius of at least 20 m of the indicator should cease. This distance should be increased at the discretion of supervisory staff if heavy machinery or explosives could cause further disturbance to the suspected heritage resource.
- This area must be marked using clearly visible means, such as barrier tape, and all personnel should be informed that it is a no-go area.
- A guard should be appointed to enforce this no-go area if there is any possibility that it could be violated, whether intentionally or inadvertently, by construction staff or members of the public.
- No measures should be taken to cover up the suspected heritage resource with soil, or to collect any remains such as bone or stone.
- If a heritage practitioner has been appointed to monitor the project, s/he should be contacted, and a site inspection arranged as soon as possible.
- If no heritage practitioner has been appointed to monitor the project, the head of archaeology at Heritage Western Cape should be contacted; telephone 033 3946 543.
- The South African Police Services should be notified by a Heritage Western Cape staff member or an independent heritage practitioner if human remains are identified. No SAPS official may disturb or exhume such remains, whether of recent origin or not.
- All parties concerned should respect the potentially sensitive and confidential nature of the heritage resources, particularly human remains, and refrain from making public statements until a mutually agreed time.
- Any extension of the project beyond its current footprint involving vegetation and/or earth clearance should be subject to prior assessment by a qualified heritage practitioner, considering all information gathered during the initial assessment.

Appendix 3: Palaeontology Chance Find Protocol

Palaeontology Chance Find Protocol

The P22071 Water Pipeline Project footprint is located within a green and a blue Palaeosensitivity zones on the SAHRIS Palaeosensitivity map. A chance find protocol is thus recommended, since the green designates this as a moderate chance fossil find area.

In the event of any palaeontological finds, a Palaeontologist accredited by a PHRA or SAHRA must be notified immediately by the project ECO or EAP:

- a site inspection must be arranged at the earliest opportunity with the Palaeontologist.
- construction activity must be halted in the area of finds and the Palaeontologist must be given sufficient opportunity to remove the material before activities continue.
- mitigation may involve the systematic collection and recording of a sample of the fossils discovered and their documentation, labelling, packaging, boxing, and curation at a cost to the developer
- It is the responsibility of the Developer, as guided by the appointed Palaeontologist to:
 - Allow for such a representative sample to be retrieved.
 - Assist in the supply of materials, labour, and machinery to excavate, load, and transport sampled material from the sampling site/s to an HSE-compliant sorting area.
 - Provide safe storage for fossil material retrieved prior to being transported to an accredited curation facility for curation.

