

**PHASE 1 HERITAGE IMPACT ASSESSMENT FOR THE CONSTRUCTION
AND UPGRADING OF THE PROPOSED ACCESS ROADS TO THE
BRAAMHOEK PUMPED STORAGE SCHEME**



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EXECUTIVE SUMMARY

Archaeology Africa, in association with **Matakoma Heritage Consultants**, was appointed by **AFRICON Environment and Sustainability Consulting** to undertake a Phase 1 Heritage Impact Assessment on the proposed access roads for the Braamhoek Pumped Storage Scheme. The scheme is undertaken by **Eskom Holdings Limited**.

The study undertaken for this report resulted in the discovery of **twenty-four** sites.

Significance assessments for all these sites were undertaken. The impact of the development on each site as well as the required mitigation measures are also provided. Refer **Section 4.2 Survey Findings**.

Apart from a number of fixed roads, three alternative routes also had to be surveyed and graded according to their relative heritage sensitivity. It was found that Alternative 1 was most sensitive, followed by Alternative 3. Alternative 2 was the least sensitive. Refer **Section 5**.

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1. INTRODUCTION

Archaeology Africa, in association with **Matakoma Heritage Consultants**, was appointed by **AFRICON Environment and Sustainability Consulting** to undertake a Phase 1 Heritage Impact Assessment on the proposed access roads for the Braamhoek Pumped Storage Scheme. The scheme is undertaken by **Eskom Holdings Limited**.

2. DESCRIPTION OF PROPOSED DEVELOPMENT AREA AND DEVELOPMENT

Please note that all information contained in this section was taken from the Scoping Report compiled by the Bramhoek Consultants Joint Venture.

2.1 Proposed Development

Eskom Holdings Limited (Eskom) has undertaken to construct the Braamhoek Pumped Storage Scheme (PSS) in order to meet expected future electricity demand. The scheme comprises upper and lower storage reservoirs, connected by enclosed tunnel systems in which pump-turbine units will be located.

The environmental impact assessment (EIA) for the PSS was compiled and submitted by Poltech in 1999, and subsequently approved by the Department of Environmental Affairs and Tourism (DEAT) on 13 December 2002. A condition of the RoD issued by the Minister of Environmental Affairs and Tourism indicated that the access roads for the PSS had not been adequately addressed, and requested that an independent EIA be conducted for access road construction.

This Phase 1 Heritage Impact Assessment therefore forms part of the current EIA undertaken on the proposed upgrading of existing provincial roads and construction of new roads required to access the upper and lower reservoir sites during the construction and operational phases of the PSS project.

2.2 Description of Development Area

The study area is located within the Drakensberg escarpment, approximately 23 km north east of van Reenen. It straddles the Free State and Kwazulu Natal provinces, falling within the Maluti a Phufong and Phumelela Local Municipalities to the north-west and the Embethweni (Ladysmith) Local Municipality to the south east.

2.2.1 The Access Roads

2.2.1.1 Alternative 1 – Bramhoek Pass

The proposed alternative 1 route follows the Drakensberg Escarpment using the existing track known as Braamhoek Pass. The new section of road will link with the existing road network to the south of the Lower Reservoir, where the Provincial Roads 48 (D48) and 275 (D275) will be upgraded to link to the R103 near Besters. The S61 from the Drakensberg Escarpment to Kiesbeen and the S790 between Kiesbeen and Swinburne would be maintained by Eskom during the construction period. This alternative will require the construction of 27 km of new road, and will result in a total road distance of 19 km between the Lower and Upper Reservoirs.

2.2.1.2 Alternative 2 – Escarpment road linking the farms Bedford and Wapad

As in Alternative 1, the D48 and D275 will be upgraded to link to the R103 near Besters. The S61 from the Drakensberg Escarpment to Kiesbeen and the S790 between Kiesbeen and Swinburne would be maintained by Eskom during the construction period. The existing D48 will be upgraded and a new link road along the escarpment will provide a link to the Upper Reservoir site. Another new link road will link D48 to the Lower Reservoir site. The S61 from the Drakensberg Escarpment to Kiesbeen and the S790 between Kiesbeen and Swinburne would be maintained by Eskom during the construction period. This alternative will require the construction of 23 km of new road, and will result in a total road distance of 30 km between the Lower and Upper Reservoirs.

2.2.1.3 Alternative 3 – Road between Kiesbeen and Bedford (S922)

This alternative will utilise the full length of the S61 and the D48, but will require the full upgrading of these roads. The S922 will provide the link to the Upper Reservoir site. The D48 and D275 will be upgraded to link to the R103 near Besters. The S790 between Swinburne and Kiesbeen would be maintained by Eskom during the construction period. This alternative will result in a total road distance of 58 km between the Lower and Upper Reservoirs.

2.2.2 Summary of the Proposed Development Area

The access roads included in the study area largely consist of existing roads, with sections of new roads in-between. The access roads can be classified into two groups, namely alternative and fixed roads.

In terms of the alternative roads, three possibilities have been proposed. These three alternatives include the Bramhoek Pass (as Alternative 1), the escarpment road between Wapad and Bedford (Alternative 2) and finally the road known as the S922 linking Kiesbeen and Bedford (Alternative 3).

The fixed roads (in other words roads for which no route alternatives exist) include the road between Swinburne in the west and the link with the R109 between Van Reenen and Ladysmith in the east, consisting of the following sections:

- Swinburne – Kiesbeen (S790)
- Kiesbeen – De Beers Pass (S61)
- De Beers Pass – Nooitgedacht (D48)
- Nooitgedacht – Besters, and linking up with the R109 between Van Reenen and Ladysmith (D275).

The other fixed road is the existing and proposed route between the D48 and the Lower Reservoir Site.

3. METHODOLOGY

The methodological approach used for the study is aimed at meeting the requirements of the relevant heritage legislation. As such a desktop study was undertaken followed by a survey of the impact areas. Informal discussions also took place with a number of individuals.

3.1 Desktop Study

The primary aim of the desktop study is to compile as much available information as possible on the heritage resources of the area. Such a study also helps in providing historical context for any sites which are located during the survey.

The desktop investigation focussed on the study of published and unpublished source material, archival records as well as historical and archival maps.

Material from the following institutions was studied:

- South African National Archives, Pretoria
- Muckleneuk Library, University of South Africa, Pretoria
- Directorate: Surveys and Mapping, Cape Town

The Natal Museum in Pietermaritzburg was paid a visit to access the Archaeological Site Record Database housed there. Even though a number of archaeological sites were identified in the general vicinity of the study area, none of these are located on or in the vicinity of any of the roads.

3.2 Field Surveys

The field surveys took place during two separate visits in September and November 2005.

The road servitude as well as a buffer zone of between 10 and 15 meters on each side of the fences was surveyed.

All located sites were briefly documented. This documentation includes photographs (where possible) and descriptions as to the nature and condition of the located material. A hand-held Global Positioning System was used to obtain site coordinates. All located sites were given unique individual numbers, from BH1 to BH24. The acronym used as part of the numbering system is derived from the project name, namely Bramhoek.

All sites were given a significance rating consisting of either one of five different significance levels. These levels are No Significance, Low Significance, Moderate Significance, High Significance and Very High Significance.

Mitigation measures are proposed for all sites of Low, Moderate, High and Very High Significance.

3.3 Consulting with Local Interested and/or Affected Parties

Please note that all information contained in this section was taken from the Scoping Report compiled by the Bramhoek Consultants Joint Venture.

A detailed public participation process has been undertaken by ACER Africa and Afrosearch. This process commenced in November 2004, and has been conducted in accordance with the principles and objectives of NEMA, and ECA. Best practice principles, such as the core values held by the International Association for Public Participation have also applied.

3.3.1 Preparation Phase

Stakeholders were identified and a comprehensive stakeholder database was created. This process is, however, ongoing and will be completed by Afrosearch through the life of the EIA process. The following broad stakeholders groups have been identified.

- National and Provincial Government (Transport, Environmental Affairs, Tourism, Agriculture, Education, etc.);
- Local Government (District and Local Municipalities);
- Conservation authorities, notably, Ezemvelo Kwa Zulu Natal Wildlife, and environmental groups, for example, the Wildlife and Environment Society of Southern Africa (WESSA) and Birdlife Africa;
- Farmers Unions and Associations;
- Tourism Associations;
- Traditional Authorities and local communities;
- Non-Government and Community-Based Organisations;
- Landowners;
- Learners;
- Media; and
- Academics and consultants.

Those I&AP's considered to be key stakeholders were personally briefed about the project, by telephone, through Key Stakeholder Workshops and via the BIDs.

3.3.2 Scoping Phase

The announcement of the project commenced in November 2004 and was achieved by a variety of methods:

Personalised Letters

Personalised letters in English, Afrikaans and Zulu were sent on 25 November 2004 to approximately 800 people, predominantly in the study area but also from further afield, informing them of the proposed project and inviting them to participate in the environmental assessment process.

Background Information Documents, Flyers and Comment Sheets

BIDs, flyers and Comment Sheets were available in English, Afrikaans and Zulu. They were sent to approximately 800 stakeholders with the personalised letters on 25 November 2004, and were also made available at the following public places in the study area:

- Ladysmith/ Emnambithi Municipal Offices;
- Ladysmith Public Library;
- Estcourt/ Umtshezi Municipal Public Library;
- Hlomisa School, Harrismith District; and
- Hamilberg School, Harrismith District.

Statutory Advertisements

The table below provides a list of newspapers in which the EIA announcements were placed, as required by the EIA Regulations. Advertisements were in English, Afrikaans and Zulu.

Print media in which EIA process was advertised

| PUBLICATION | DISTRIBUTION | LANGUAGE | PUBLICATION DATE |
|---------------------------------|---------------------|-----------------|-------------------------|
| <i>Natal Witness</i> | Regional | English | 26 November 2004 |
| <i>Ilanga</i> | Regional | Zulu | 25 November 2004 |
| <i>Harrismith Chronicle</i> | Community | English | 26 November 2004 |
| <i>Harrismith Chronicle</i> | Community | Afrikaans | 26 November 2004 |
| <i>Estcourt and Midlands Ne</i> | Local | English | 26 November 2004 |
| <i>Rapport</i> | National | Afrikaans | 28 November 2004 |
| <i>Sunday Times</i> | National | English | 28 November 2004 |
| <i>Ladysmith Gazette</i> | Local | English | 26 November 2004 |

An article was published in the Agri-SA Magazine in the February/March 2005 issue.

A project web site (www.eskom.co.za/eia) was published to host all documentation. Public Participation process documents currently loaded onto the web site include

advertisements, the BID and the comment sheet. The project web site is updated on a regular basis.

Key Stakeholder and Authority Workshop

A Key Stakeholder Workshop was held on 30 November 2004 at the Ladysmith Royal Hotel. The purpose of this workshop was to enable key stakeholders, the proponent and the Authorities to interact directly with each other, and to identify issues of concern. The consultants and the proponent, Eskom, gave presentations on the EIA process and the project, after which key stakeholders were given the opportunity to raise their issues and concerns.

3.3.3 Public Open Days

Four Public Open Days were convened as follows:

- 29 November 2004, Estcourt/Umtshezi Municipal Public Library, 13h00 to 18h00.
- 30 November 2004, Ladysmith Royal Hotel, 13h00 to 18h00.
- 1 December 2004, Hamilberg School (Harrismith District), 10h00 to 12h00.
- 1 December 2004, Hlomisa School (Harrismith District), 14h00 to 17h00.

The purpose of the Public Open Days was to enable I&APs, the proponent and the project team to interact directly with each other, and to identify issues of concern. There were presentations by the consultants and the proponent, Eskom, after which I&APs were given the opportunity to raise their issues and concerns (translations were provided, where necessary). Posters were presented on a mobile display with detailed project information and maps. Project information was available in English, Afrikaans and Zulu.

Focus Group Meetings

Focus Group Meetings were held at the request of stakeholders. Two focus group meetings were convened as follows:

- 18 February 2005, Ladysmith/ Emnambithi Local Municipality, 08h00 to 10h00.
- 18 February 2005, Various Harrismith District Farmers Associations and local residents, 18h00 to 21h00.

The purpose of the Focus Group Meetings was to enable I&APs and the project team to interact directly with each other, and to identify issues of concern.

Interaction through the Public Participation Office

The public and registered I&APs were provided with the contact details (telephone, facsimile, postal address and e-mail address) of the Public Participation Office in order for them to interact directly with the PPP team, either with queries or to submit comment.

Landowner Identification

The process of landowner identification is a lengthy and difficult process as there is no single database that records all the property names, associated landowner names and contact details. To date, ACER has identified as many potentially affected landowners as possible and briefed them about the project. This is an on-going exercise that will continue for the duration of the project until all landowners have been identified and consulted.

Public review of Draft Scoping Report (DSR)

The following PPP activities comprise the public review process of the DSR:

- The DSR was made available in the public domain for review and comment before being finalised and submitted to the National Department of Environmental Affairs and Tourism (DEAT), Free State Department of Tourism, Environmental and Economic Affairs (FS DTEEA) and Kwa Zulu Natal Department of Agriculture and Environmental Affairs (KZN DAEA). The duration of the comment period was four weeks (25 April – 25 May 2005);
- The DSR was available at the following venues during this period:-
 - Ladysmith Public Library.
 - Harrismith Public Library.
 - Green Lantern Inn, Van Reenen.
- A letter was sent to all registered I&APs informing them of the availability of the report and Comments Period;
- Key stakeholders were contacted telephonically;
- The following key stakeholders received copies of the DSR:-
 - Department of Environmental Affairs and Tourism.
 - KwaZulu-Natal Department of Agriculture and Environmental Affairs.
 - Free State Department of Tourism, Environmental and Economic Affairs.
 - Free State Department of Agriculture.

- Free State Conservation Department.
- Ezemvelo KZN Wildlife.
- Thabo Mofutsunyane District Municipality.
- Uthukela District Municipality.
- Emnambithi/Ladysmith Local Municipality.
- Maluti a Phofung Local Municipality.
- Besters Farmers Association.
- Harrismith District Farmers Union.
- South African Heritage Resources Agency.
- Institute for Cultural Resources Management.
- Wildlife and Environment Society of SA.
- Middelpunt Wetland Trust.
- South African National Roads Agency.
- N3 Toll Concession.
- Free State Department of Roads.
- Print media advertisements were placed in national, regional and local newspapers in English, Afrikaans and Zulu as follows:-

| PUBLICATION | DISTRIBUTION | LANGUAGE | PUBLICATION DATE |
|-----------------------------------|---------------------|-----------------|-------------------------|
| <i>Natal Witness</i> | Regional | English | 4 April 2005 |
| <i>Ilanga</i> | Regional | Zulu | 4 April 2005 |
| <i>Harrismith Chronicle</i> | Community | English | 4 April 2005 |
| <i>Harrismith Chronicle</i> | Community | Afrikaans | 4 April 2005 |
| <i>Estcourt and Midlands News</i> | Local | English | 4 April 2005 |
| <i>Rapport</i> | National | Afrikaans | 4 April 2005 |
| <i>Sunday Times</i> | National | English | 10 April 2005 |
| <i>Ladysmith Gazette</i> | Local | English | 4 April 2005 |

Draft Scoping Report Public Meeting

A DSR Public Meeting was held on 6 May 2005, 09h30 to 12h00 at the Ladysmith Royal Hotel. The purpose of this meeting was to enable key stakeholders, the proponent and the Authorities to discuss and comment on the findings of the DSR. The consultants gave presentations, after which key stakeholders were given the opportunity to raise their issues and concerns.

DSR Focus Group Meetings

Focus Group Meetings were held at the request of stakeholders. Two focus group meetings were convened as follows:-

- 5 May 2005: various Harrismith District Farmers Associations and local residents, 18h00 to 20h30.
- 6 May 2005: Ladysmith/Emnambithi Local Municipality, 13h00 to 14h30.

The purpose of the Focus Group Meetings was to enable I&APs with a common interest to discuss and comment on the findings of the DSR, and to identify further issues of concern.

4. FINDINGS

4.1 Desktop Study Findings

4.1.1 Black communities during the Late Iron Age and Early Historical Period.

4.1.1.1 The study area to the east of the Drakensberg escarpment

According to an undated map showing the distribution of the various Black groups in Natal during 1812, three groups resided in and directly adjacent to the study area east of the Drakensberg escarpment. These were the Zizi, Miya and Bhele (refer **Figure 1**). The presence of both the Zizi and Bhele groups in this area is confirmed in an enclosure to a despatch written by the Lieutenant Governor of the Natal Colony, J. Scott. The enclosure is dated 26 February 1864, and lists the "*...tribes which occupied the territory now forming the Colony of Natal...before they were broken up by Chaka's wars.*"

A map appearing in Tim Maggs' *Iron Age Communities of the Southern Highveld* (1974:304-305) which depicts the southern highveld in c.1800, also shows the Zizi in the study area east of the Drakensberg escarpment. Maggs furthermore indicates the existence of a number of stone settlements in the valley of the upper Tukela river and its tributaries below the Drakensberg Escarpment. These settlements are described as comprising "*...numbers of primary enclosures loosely grouped but not appearing to follow a very distinct settlement pattern*" (Maggs, 1976:45). He adds that the historical evidence available at the time suggested that these settlements predate the Zulu empire in that the upper Tukela was depopulated during the first half of the nineteenth century.

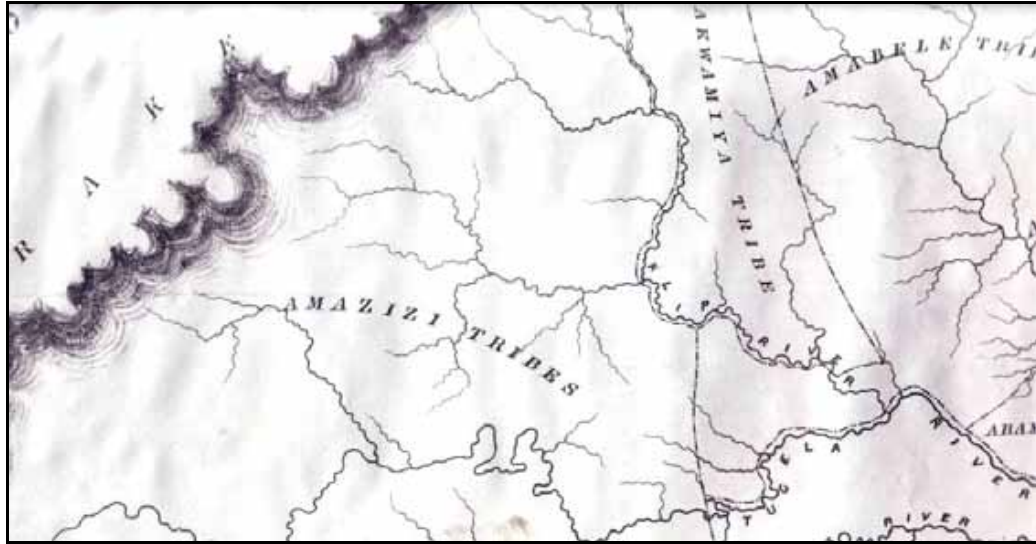


Figure 1 Enlarged section of a historical map showing the different Black groups of Natal, as well as their general distribution. Although undated, the map reflects the situation in 1812 (National Archives, Maps, 3/1631 I).

The presence of the Bhele in the area under discussion as alluded to before, is confirmed by Bryant (1929). He indicates their area of settlement before the start of the Mfecane as enclosed by the Biggarsberg as well as the Klip and Tukela rivers (Bryant, 1929).

4.1.1.2 The study area to the west of the Drakensberg escarpment

During the same period, namely c. 1800 and earlier, the area to the west of the Drakensberg were inhabited by various Kgatla groups. Three of the original five Kgatla groups representing the five sons of Thabane, namely the Maphuting, Sia and Tlokwa, resided at one stage or another in the general area.

- After a stay in the vicinity of the Swazi, the Maphuting moved to the upper Tukela river areas before settling along the Wilge (Namahali) river valley (Maggs, 1974). According to Bryant (1929), the Maphuting was already established in these areas during c.1715. The Maphuting later moved north of the Vaal to the present-town of Heidelberg.
- After adopting the porcupine emblem, the Sia had moved to the southern part of the Wilge (Namahali) river in the vicinity of the present town of Harrismith.
- During the early 1800s the Tlokoa moved from the Wakkerstroom area to settle over most of the Wilge (Namahali) river valley. It is of considerable interest to note that the Tlokwa had political and economic relations with the people of the

upper Tukela (Maggs, 1974). Maggs (1974) suggests that the Tlokwa traded cattle and possibly karosses for iron goods from the Zizi, who were living on the eastern side of the escarpment.

4.1.1.3 The entire study area during the Mfecane

One of the more significant individuals during the initial years of the Mfecane in the region, was Matiwane of the Ngwane. Matiwane originally stayed along the White Umfolozi river, which is to the north-east of the study area (Peires, 1995)(Wright, 1995).

He was attacked by Zwide of the Ndwandwe, after which he fled in a western direction. With time Matiwane and his followers swerved into a south-western direction and crossed over the Biggarsberg, which as mentioned before formed the one geographical boundary for the Bhele. He subsequently continued in a south-western direction, and finally reached the Tukela river valley.

Matiwane and his amaNgwane later established themselves in the vicinity of the present Bergville, from where they attacked and usurped the Zizi and Bhele groups along the foot of the Drakensberg mountains. While some of these groups fled southward, others submitted to Matiwane's rule. The Ngwane soon had a paramountcy dominating the Thukela river area (Wright, 1995).

The Zizi and Bhele were also not the only groups encountered and attacked by Matiwane. Peires (1995) for example states that during the stay of Matiwane in the vicinity of Ladysmith, he encountered Zizi and Hlubi groups. Bryant (1929) also refers to the fact that Matiwane had encountered Hlubi, and states that he also attacked them with such intensity that the Hlubi fled across the Drakensberg. After crossing the mountains the Hlubi attacked the Tlokwa, who are seen as the first group to experience the disruptions and unrest known as the Mfecane in the southern highveld (Maggs, 1974).

Matiwane, threatened by Shaka of the Zulu, subsequently also fled across the Drakensberg, and in the same way as the Hlubi, started attacking the local Tlokwa in the vicinity of present-day Harrismith (Bryant, 1929).

4.1.2 Anglo Boer War

Although the wider vicinity of the study area is well-known for its Anglo Boer War battles and historic sites, the study area itself seems to have acted more as a landscape over

which the armies moved rather than a site for significant battles or events. A single skirmish in the vicinity of Besters Station is the only engagement from the war taking place in close proximity of the study area.

4.1.2.1 The mountain passes

Shortly before the outbreak of hostilities in 1899, the Boer forces occupied all the Drakensberg passes, including De Beers Pass, Van Reenens Pass, Mullers Pass and Bothas Pass. This task of guarding the passes fell to the Free State Commando's. The forces of the Free State Republic were commanded by Commandant Marthinus Prinsloo. By 13 October 1899 all the passes were guarded.

The Harrismith Commando, consisting of some 500 men, held the positions at Tandjesberg (i.e. De Beers Pass) and Mullers Pass.



Figure 2 A group of Boer officers. Hoofkommandant Marthinus Prinsloo is standing in the centre (Breytenbach, 1973).

4.1.2.2 Besters Station

On the evening of 17 October 1899 the Free State Commando's moved into Natal from their positions on the passes. This attacking force was under the command of C.J. de Villiers.

During the day of 18 October 1899, a group of 50 members of the Harrismith Commando under the command of Field-Cornets De Beer and Pretorius, came upon a group of Natal Carbineers who held a position on a ridge to the west of Bester Station. Fighting broke out between the opposing sides, and the Natal Carbineers made a disciplined retreat towards Ladysmith. The engagement came to an end late that afternoon when the British force was able to disengage themselves from the Boers.

On British side one soldier, only known as Sinclair, died. The Boer side also lost a single man, namely F. Johnstone.

After the skirmish the Free State Commandos occupied Besters Station.

4.1.3 Roads and Mountain Passes

Based on physical appearance, the Drakensberg mountains form a considerable obstacle to free movement across the landscape. However, for many centuries its foothills, slopes and scarps have been crossed and traversed by various groups of people.

4.1.3.1 Movement over the mountain during the Late Iron Age

Ethnographic texts and oral historical references tell us that as far back as the 1700s (and before) different groups of people travelled across the Drakensberg range for various reasons. One such example is the movement of Mtiti and a group of his Zizi followers across the mountain in c. 1715. Bryant (1929) also mentions that a number of Zizi families had in fact crossed the mountains long before the trek of Mtiti. The leaders of these families are Matshekane, Mafu and Ndlovu.

A trade network also existed between the Zizi on the eastern side of the mountain and the Tlokwa on its western side. This trade network included the movement of cattle across the mountains.

All of this tells us that the Drakensberg mountains have for many years had footpaths, trails and mountain passes which allowed the movement of people across its expanse.

The earliest recorded dates available for some of the mountain passes in and around the study area, is the indication of their existence on a map made by Daumas and printed in 1847. On this map the De Beers Pass is indicated. Van Reenens Pass, situated a short distance to the south-west, was built in 1856 (Steytler, 1932)

4.1.3.2 Voortrekkers

The first recorded use of a wagon (in other words a transport method that would require some form of road) in and surrounding the study area was when a party of Voortrekkers under the leadership of Gerhardus Marthinus Maritz moved through the area on their way to Natal.

It is recorded that Maritz's party passed the area where the present town of Harrismith is located, from where they travelled in a south-eastern direction. On their way to the Drakensberg range they passed Nelsonskop. They crossed over the Drakensberg at the De Beers Pass, and moved onto the level plains of Natal where, on Sunday, 16 December 1837, they met up with the Voortrekker group under Piet Retief (Thom, 1947). It is worth noting here that although Thom (1947) indicates the De Beers Pass as Maritz's crossing point over the mountains, Steytler (1932) does not confirm or dispute it. Steytler simply states that the Maritz trek had crossed over the mountains in the vicinity of Nelsonskop.

Although very little information is available with regards to the actual movement of the ox-wagons over the De Beers Pass, the daughter of one of the trekkers later wrote that it took them from very early the morning to very late in the afternoon to move their wagons down the mountain (Thom, 1947).



Figure 3 Undated map that shows the routes followed by the different Voortrekker parties (National Archives, Maps, 1/56). The arrow marks the approximate position of De Beers Pass.

4.1.3.3 The roads and passes as depicted on archival and historical maps

As mentioned before, the earliest map depiction of the De Beers Pass was on the Daumas map which dates from 1847.

4.1.3.3.1 Undated Map (National Archives, Maps, 3/1873).

The map depicted in **Figure 4** is believed to be the oldest map found during the present study. It bears the names of Moffat and the London Missionary Society, and although undated, shows the town of Harrismith which was established in 1849. It can therefore be suggested that the map post-dates 1849.

The map shows two different roads leading from Harrismith, and meeting south of Nelsonskop. From here a single road leads in a south-eastern direction up to the Drakensberg escarp. On the escarp the road splits in two and only converges on the eastern side of the mountain. It is believed that these two roads over the escarp represent the present De Beers and Bramhoek Passes.

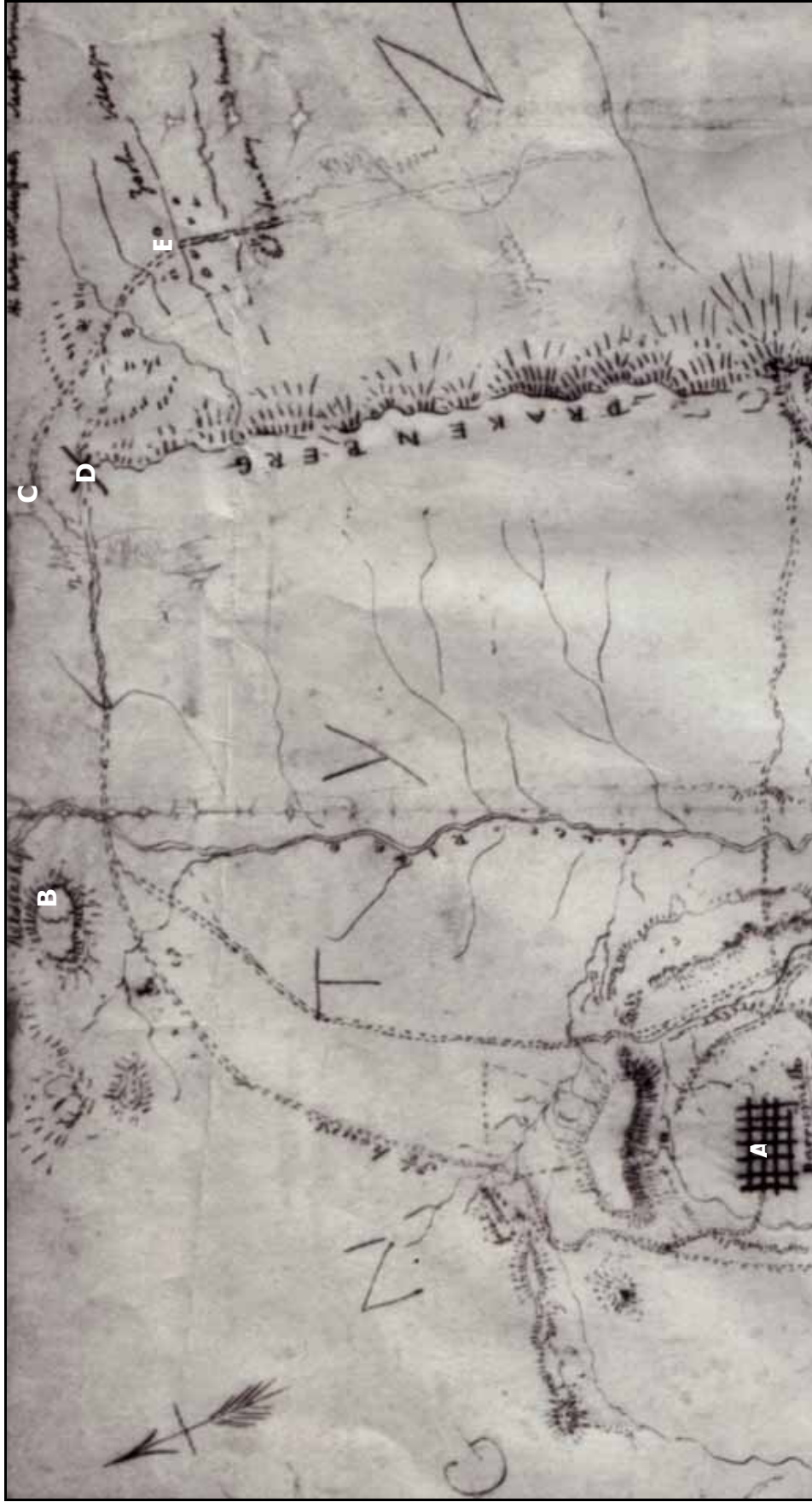


Figure 4 Hand drawn, undated map showing Harrismith (A), Nelsonskop (B), presumably Bramhoek Pass (C), De Beers Pass (D), "Zoolu Villages" (E) as well as the existing roads at the time (National Archives, Maps, 3/1873).

4.1.3.3.2 Undated Map (c. 1890s)

Although the map depicted in **Figure 6** is undated, it is believed to date from the late nineteenth century. The map shows De Beer Pass as well as Van Reenen Pass. The roads between Harrismith and Nelsonskop depicted on the map show a strong resemblance to the roads shown on the Moffat map, with two roads converging near Nelsonskop.

4.1.3.3.3 Ladysmith sheet of the Imperial Map of South Africa (April 1900)

This map shows the study area in the first year of the Anglo Boer War. In general terms the main road between Harrismith and De Beers Pass is again shown, with a number of small roads leading off from it.

A wagon road is shown splitting from the De Beers Pass road and eventually following the escarp of the mountain.

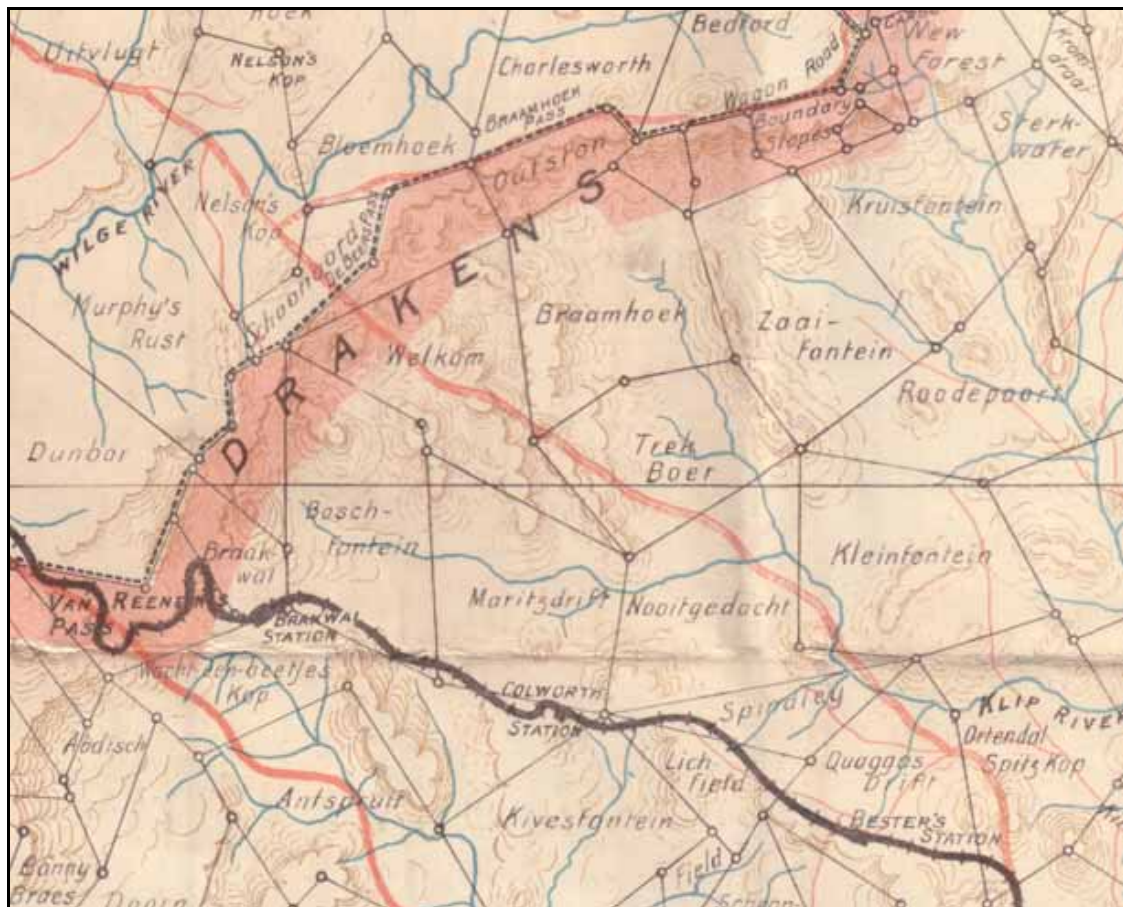


Figure 5 Ladysmith sheet of the Imperial Map of South Africa, dated April 1900 (National Archives, Maps, 3/500).

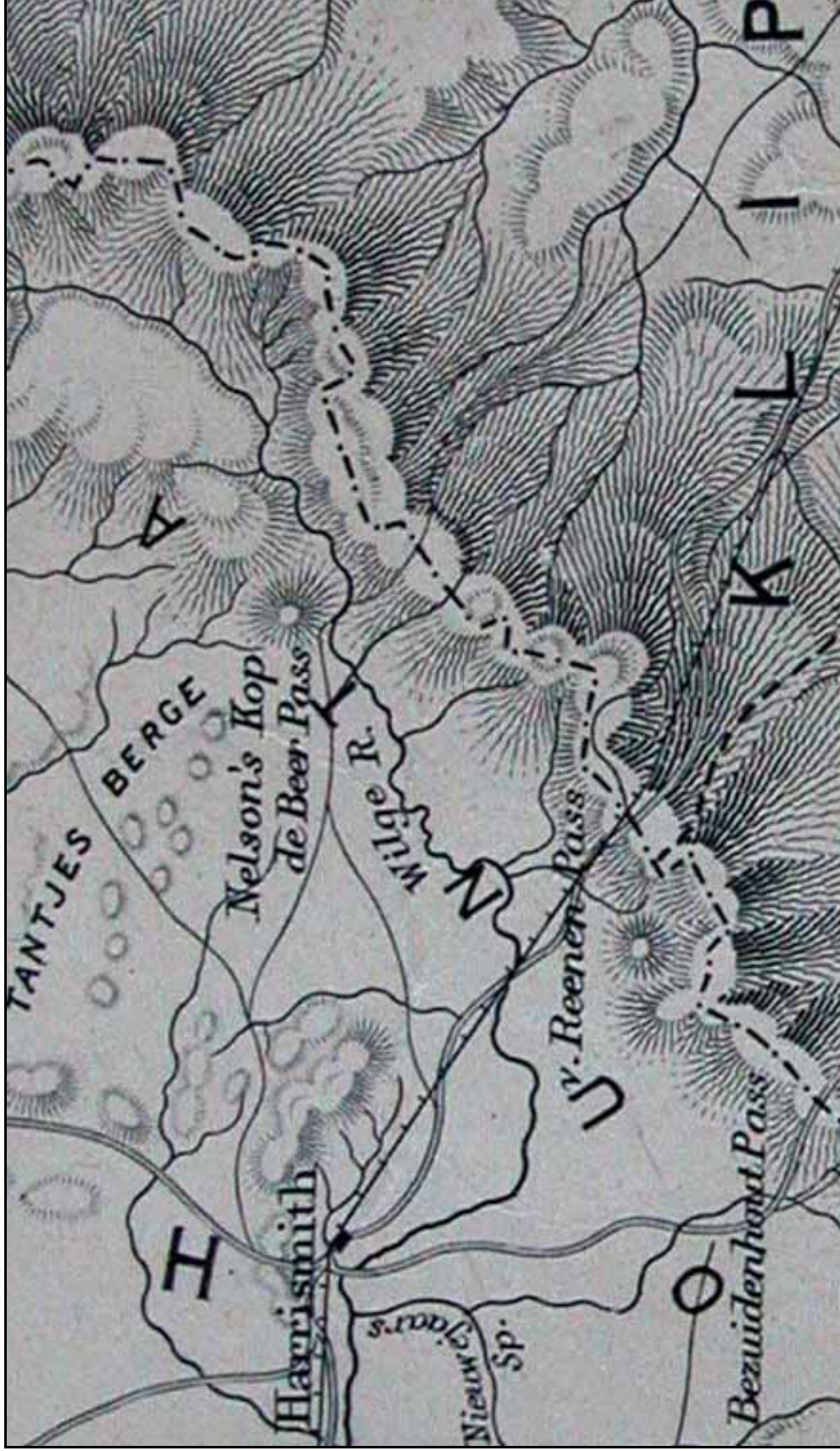


Figure 6 Enlarged section of an undated map (c. 1890s).

4.1.3.4 Comparing the roads on the 1908 map with those from the late 1980s.

The oldest available archival map that shows the layout of the roads in the study area in enough detail for comparisons to be made, is the Harrismith Sheet of the 1:125 000 Orange Free State Series. The map was surveyed by the Colonial Survey Section RE in 1908, and printed for the War Office in 1912.

As the map forms part of the "Orange Free State Series", only the roads located to the west of the Drakensberg can be compared.

The section of road between the provincial boundary on the farm Wapad and the fourway crossing at Kiesbeen shows three main differences if compared to the 1987 2829AD VAN REENEN topographical sheet. These differences or changes can be seen in **Figure 7**. Please note that the depicted sections are the 1908 map, and the route followed by the road marked on the 1987 map, is indicated in light purple.

The visible changes on the road between the Kiesbeen crossing and the farm Bedford is indicated in **Figures 8** and **9**. The depiction in **Figure 8** shows two changes when compared to the 2829AB GROOTHOEK (1987) and 2829BA SANTIAGO (1986) maps. These changes are again shown in light purple.

The area surrounding the present Chatsworth bridge over the Wilge river, is depicted in **Figure 9**. Please note that for the section of road north of the Wilge river very little drastic changes are seen. However, the entire road leading from the bridge into a southern and south-eastern direction marked on the 2829BA SANTIAGO (1986) map, is not shown in the 1908 map.

The final two figures (**Figure 10** and **11**) depicts the sections of the road leading between the Kiesbeen crossing and Swinburne. As can be seen from the 1908 map, various sections of this road did not exist in 1908, while others consisted of "*Unfrequented Wagon Roads*".

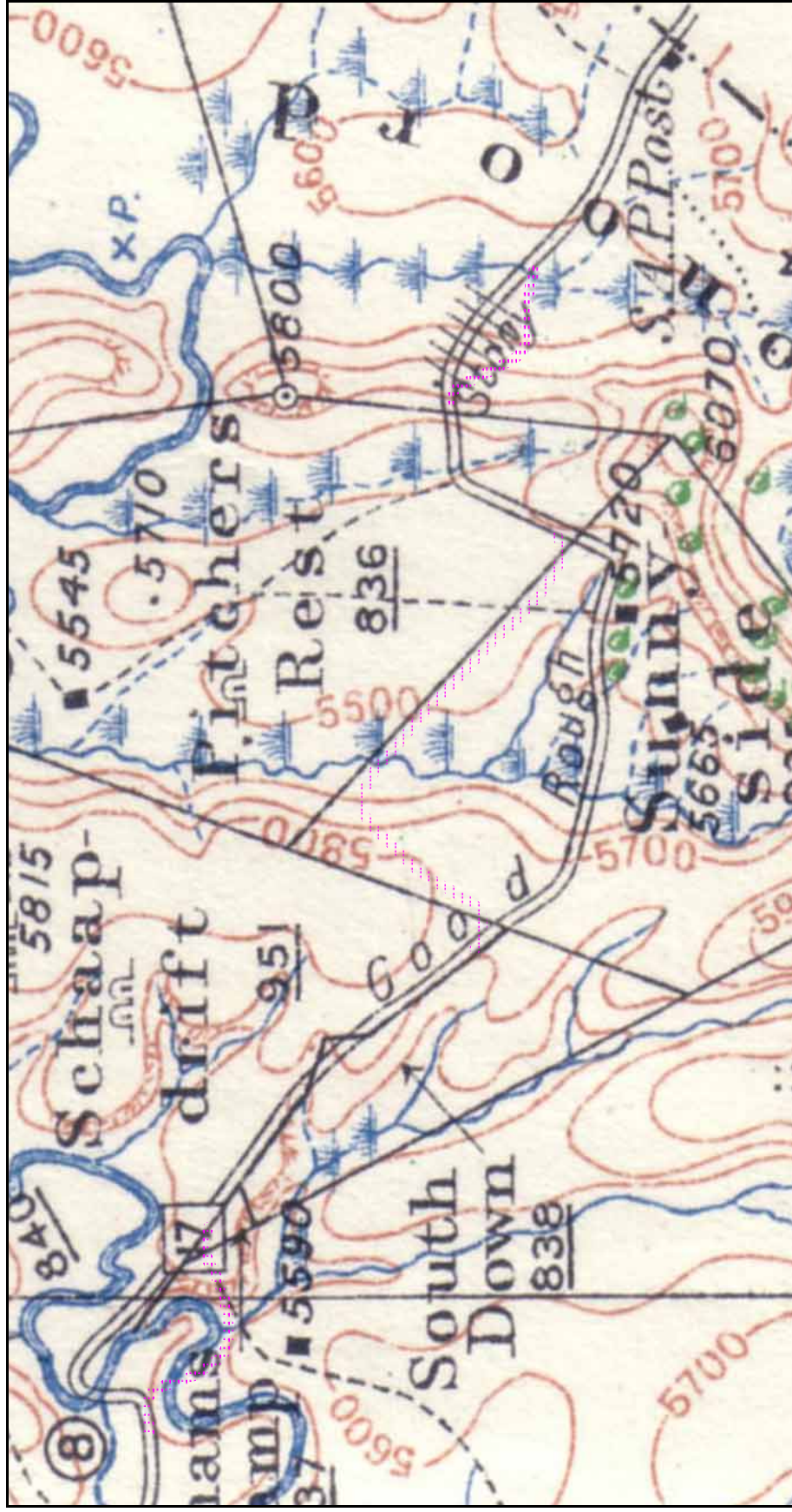


Figure 7 The section between the provincial boundary on the right and the crossing over the Wilge river on the left is shown. Three differences in road layout between the 1908 and 1987 maps are visible, and marked in light purple. The areas of the road not marked, are exactly the same.

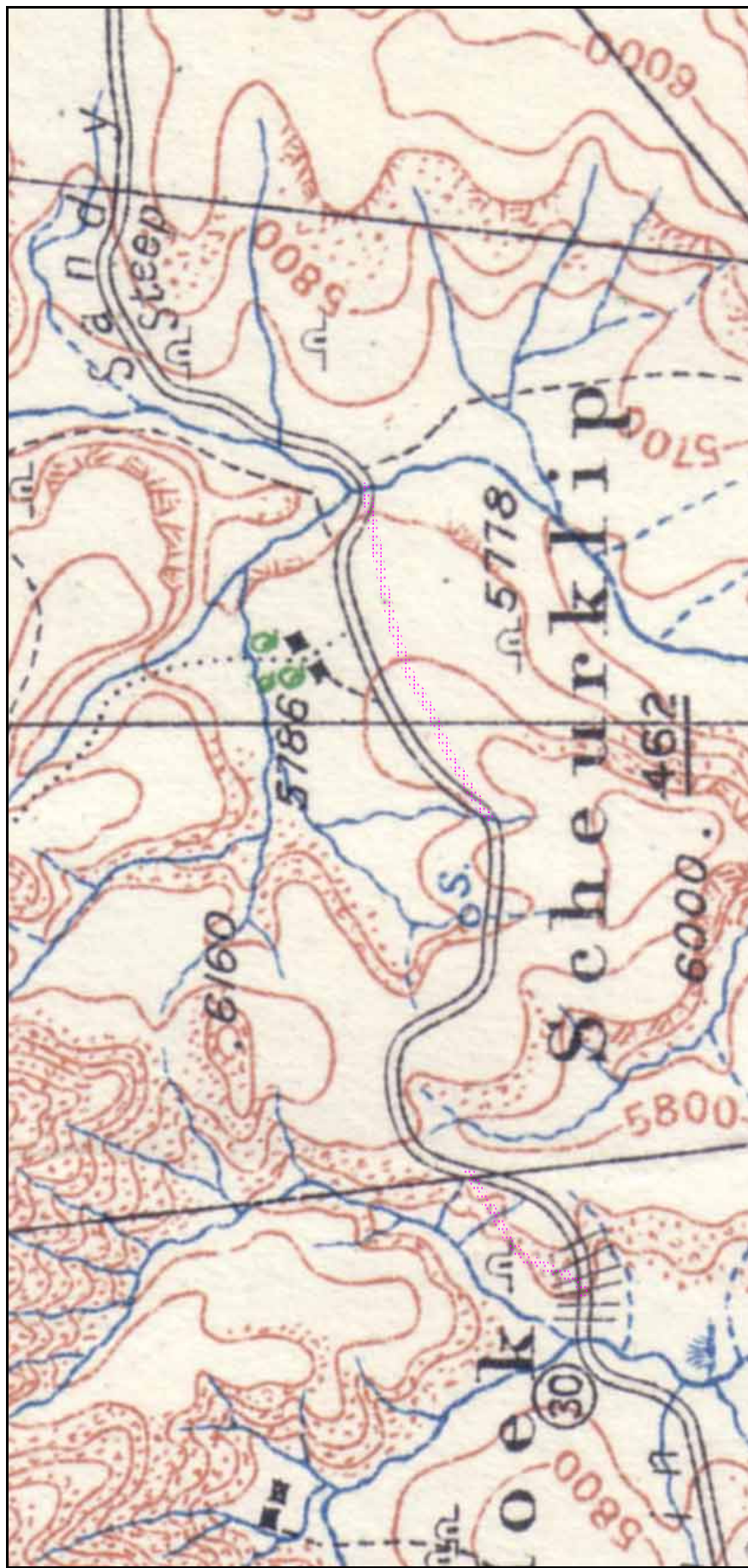


Figure 8 The section over portions of the farms Nelsonshoek and Scheurklip of the S922 road between Kiesbeen and Bedford is shown. Two differences between the 1908 and 1986/1987 maps are shown on this section.

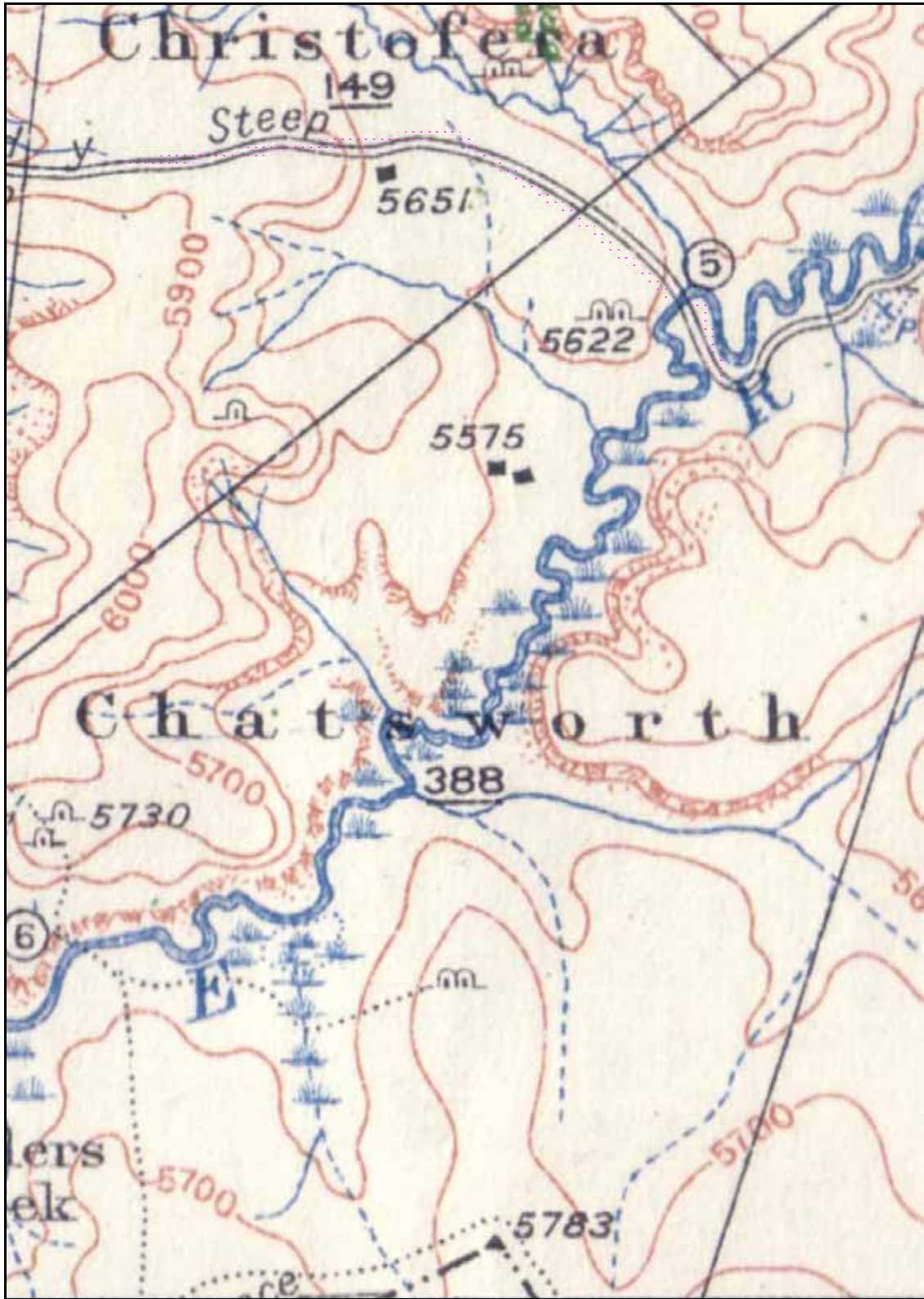


Figure 9 The section of the S922 road in the vicinity of the Chatsworth bridge/crossing is shown. Although some relatively minor differences can be observed on the road north of the river, the present road leading from the river in a southern direction did not exist in 1908.

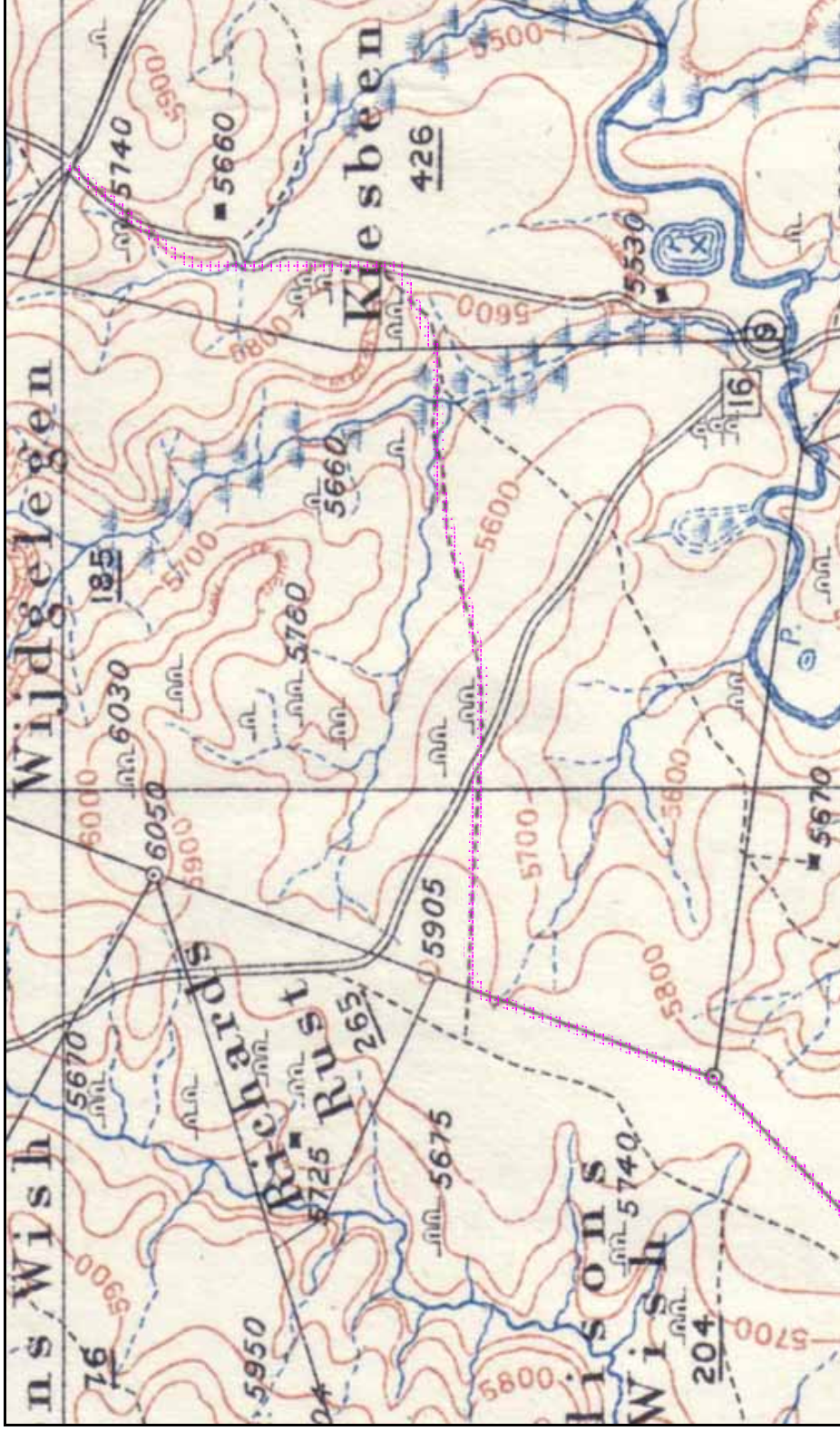


Figure 10 The northern section of the Kiesbeen - Swinburne road is shown. It is evident from the map comparisons that large portions of the present road did not exist at the time.

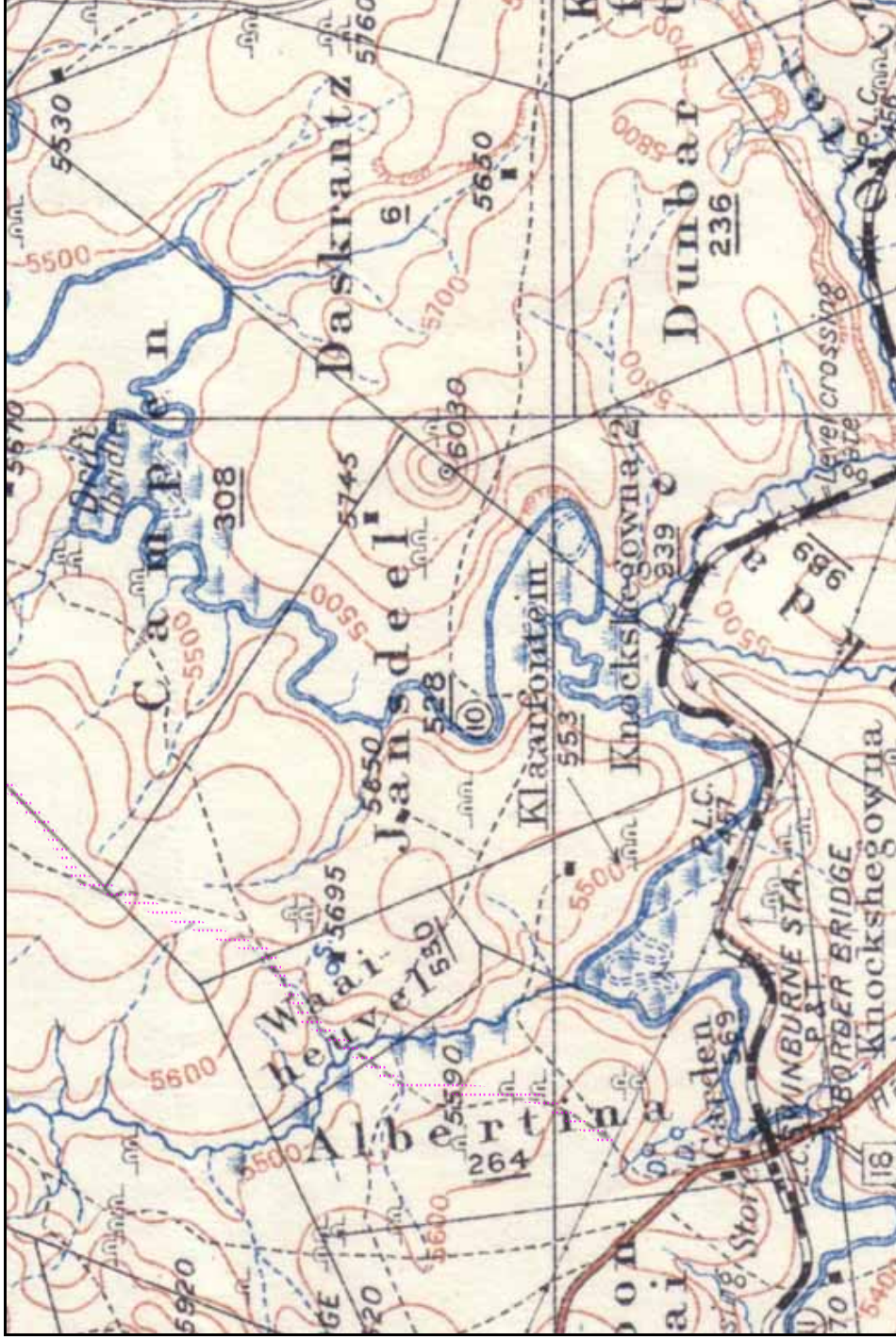


Figure 11 The southern section of the Kiesbeen - Swinburne road. It is evident from the map comparisons that large portions of the present road did not exist at the time.

4.2 SURVEY FINDINGS

Twenty-four heritage sites were located during the field survey. Refer **Annexure B Site Distribution Map**.

4.2.1 Site BH1

4.2.1.1 Site Coordinates and Description

28.25109 S

29.55276 E

Unidentifiable stone structure situated on top of the Drakensberg range. The structure, which is orientated along the north-south axis, is not associated with any other cultural material or features in the vicinity.

The structure is situated some distance away from the road, and no negative impact is expected.



Plate 1 Stone structure at site **BH1**.

4.2.1.2 Site Significance

No material culture is associated with the structure. Furthermore, the structure does not form part of a formal settlement. As a result, **BH1** is of **Low Significance**.

4.2.1.3 Mitigation

If either Alternatives 1 or 2 is approved (and the road in the vicinity of the site developed), **Site BH1** is still not expected to be impacted upon. The site is located some distance away from the existing track.

However, should the alignment of the road be changed so that the site will be impacted upon, the following recommendations would be required:

- Field mapping of site

4.2.2 Site BH2

4.2.2.1 Site Coordinates and Description

28.26735 S

29.51878 E

The site consists of a stonewall which was packed in a straight line. The feature is approximately 20m in length. The wall is double-packed, and is located on the mountain's scarp.

From the 2829BC BESTERS map it is evident that **BH2** is located close to the western boundary of the farm Oulsten 8510. The feature can therefore possibly be described as an old farm boundary.

The existing road of the Bramhoek Pass passes over a section of the site.



Plate 2 General view of the possible boundary wall.

4.2.2.2 Site Significance

The stonewall is already impacted upon by the Bramhoek Pass road and although it might be older than 60 years, it is not a unique feature in the landscape. As a result, **BH2** is of **Low Significance**.

4.2.2.3 Mitigation

If Alternative 1 is approved, **Site BH2** will be impacted upon. However, this impact is expected to be minimal as the existing Bramhoek Pass track already cuts through the site. Furthermore, as the site consists of a elongated feature, very little additional impacts are expected unless the road alignment is changed.

- No mitigation measures are required

4.2.3 Site BH3

4.2.3.1 Site Coordinates and Description

28.28267 S

29.53553 E

The site is comprised of a number of features located in the same general location. Undecorated potsherds, iron objects and possible ash lenses were also observed in the area. The features include the following:

- A stone-lined structure orientated along the east-west axis. This may be a grave.
- Terrace walling.
- Rectangular foundations of at least two structures.



Plate 3 Stone-lined structure that may be a grave.

4.2.3.2 Site Significance

The dwelling foundations are associated with farm labourer housing. These foundations are not significant. However, a worst case scenario, wherein the stone-lined structure is indeed a grave, was used to assess the site significance. As a result the site is given a **High Significance** rating.

4.2.3.3 Mitigation

Even if Alternative 1 is approved, **Site BH3** is not expected to be impacted upon. However, should this alignment change, the following mitigation measures will be required:

- Reconnaissance excavation of the stone-lined structure must be undertaken to assess whether it is a grave. This excavation can only take place once a permit from AMAFA has been received. Should suitable evidence for the existence of a grave be found (i.e. coffin fragments, burial pits, skeletal remains etc.), the excavation hole must be backfilled and a full grave relocation process undertaken.

4.2.4 Site BH4

4.2.4.1 Site Coordinates and Description

28.28205 S

29.53561 E

This site is associated with **Site BH3**, and consists of a rectangular stone cattle kraal. Two enclosures were added to the outer wall of the kraal and are interpreted as keeps for small livestock.

The site is situated close to a small stream. Associated material culture consists of a broken lower grinder.

4.2.4.2 Site Significance

This rectangular stone structure interpreted as a cattle kraal dates from the relative recent past and is not a unique feature. Therefore, **BH4** is of **Low Significance**.

4.2.4.3 Mitigation

Even if Alternative 1 is approved, **Site BH4** is not expected to be impacted upon. However, should this alignment change, the following mitigation measures will be required:

- Field mapping of the site.



Plate 4 Section of the stone kraal at **Site BH4**.

4.2.5 Site BH5

4.2.5.1 Site Coordinates and Description

28.28234 S

29.53847 E

This is the location of a highly disturbed stonewall foundation. A number of undecorated potsherds were observed in the surrounding area. The general area is characterised by sheet erosion.

4.2.5.2 Site Significance

The possibility exists that this stone foundation formed part of a Late Iron Age/Historic settlement. The walling was most probably robbed to construct the more recent structures from **Site BH3** and **Site BH4**. Due to the disturbed nature of the site, **BH5** is of **Low Significance**.



Plate 5 The disturbed stonewall at **Site BH5** is barely visible.

4.2.5.3 Mitigation

If Alternative 1 is approved, **Site BH5** will be impacted upon. The following mitigation measures are recommended:

- A watching brief is proposed to monitor the site during the construction phase. If any archaeological finds or features are exposed, a re-assessment of the site may be required.

4.2.6 Site BH6

4.2.6.1 Site Coordinates and Description

28.28340 S

29.54750 E

The site consists of the old Bramhoek farmstead. The farmstead comprises the following structures:

- Rectangular foundation structure that was the dwelling. Mud bricks as well as red fired bricks were used in its construction. The preservation of the dwelling is very poor with only the footprint still visible.
- Small rectangular stables that consist of a stone and mortar foundation structure with a mud brick extension on top. These extensions are called *deige*. The mud brick sections of the inner and outer walling were plastered. The structure's doorframes and supporting cross-beams are all made of wood, while the roof is missing.

The farmstead is associated with exotic planted vegetation.

The proposed Bramhoek Pass road is too far away to impact on the farmstead. If the road alignment is changed so that the line of the planned road moves closer to the farmstead, suitable mitigation measures must be undertaken.



Plate 6 General view of the site. The arrow marks the dwelling's position.



Plate 7 Remains of the farm dwelling. Note the mud bricks on the right as well as the more conventional red fired bricks on the left.



Plate 8 The remains of what used to be the farmstead's stables.



Plate 9 Close-up view of the stone structure with the mud brick extension (*deige*) on top.

4.2.6.2 Site Significance

The farmstead is associated with the Bramhoek Pass in that the old road that led up the mountain, passes a relative short distance south of the site. Although the age of the pass would not necessarily reflect an age for the farmstead, it is worth noting that the first indication of the Bramhoek Pass on the available cartographic material was on the Ladysmith sheet of the Imperial Map of South Africa, dated April 1900 (National Archives, Maps, 3/500).

The method and materials used in the construction of the site's buildings as well as the relative small size of the farmstead all indicate that the site is at least older than 60 years.

The site is of **Moderate Significance**.

4.2.6.3 Mitigation

Even if Alternative 1 is approved, **Site BH6** is not expected to be impacted upon.

- No mitigation measures are required.

However, should this alignment change, the following mitigation measures will be required:

- Full recording of the farmstead and surroundings, which would include a detailed layout plan of the farmstead as well as layout plans and descriptions of all the individual structures located on site.
- Any disturbance or destruction of the site can only take place with a destruction permit issued by AMAFA.

4.2.7 Site BH7

4.2.7.1 Site Coordinates and Description

28.28608 S

29.55188 E

The site consists of two oval shaped stone packed concentrations that could possibly be graves. These concentrations are also roughly orientated along the east-west axis. This site is associated with the circular enclosures at Site **BH8**.

4.2.7.2 Site Significance

A worst case scenario, wherein the two stone concentrations are considered to be graves, was used to assess the site significance. As a result the site is given a **High Significance** rating.



Plate 10 The possible graves at **Site BH7**.

4.2.7.3 Mitigation

If Alternative 1 is approved, the site is expected to be impacted upon by the development. Therefore, the following mitigation measures would be required:

- Reconnaissance excavations of the two stone structures must be undertaken to assess whether they are indeed graves. These excavations can only take place once a permit from AMAFA has been received. Should suitable evidence for the existence of graves be found (i.e. coffin fragments, burial pits, skeletal remains etc.), the excavation holes must be filled in and a full grave relocation process undertaken.

4.2.8 Site BH8

4.2.8.1 Site Coordinates and Description

Settlement Unit A

28.28637 S

29.55203 E

Settlement Unit B

28.286610 S

29.553400 E

This site consists of two Late Iron Age settlement units, referred to as Settlement Unit A and Settlement Unit B. These units are located approximately 80 meters apart and are situated near the foothills of the Drakenberg range.

Each unit consists of more than one stone-walled circular enclosure of which some are linked. These enclosures have an average diameter of approximately five meters in diameter.

The building technique conforms to typical Late Iron Age stone-wall construction method with double-packed sides and stone rubble infill.



Plate 11 This photograph depicts a section of one of the circular stone enclosures.

A single stone-packed concentration similar to the features found at **Site BH7** was observed in the vicinity of the circular enclosures. This structure can potentially also be a grave.



Plate 12 Close-up view of a section of stonewalling from **Site BH8**.



Plate 13 Stone concentration at **BH8**.

4.2.8.2 Site Significance

Since no archaeological deposit is present, and few if any cultural material is associated with the site, the stone-walling can be considered to be of **Low to Moderate Significance**.

A worst case scenario, wherein the possible grave is indeed a grave, was used to assess the site significance. As a result the site is given a **High Significance** ranking.

4.2.8.3 Mitigation

If Alternative 1 is approved, **Site BH8** will be impacted upon. The following mitigation measures are recommended:

- The site must be carefully documented in the form of photographs and scaled layout maps.
- After documentation, a destruction permit must be applied for from AMAFA. The site may only be disturbed or destroyed once a permit has been issued.
- The issuing of the permit must be subjected to the condition that a watching brief is agreed upon to monitor the site during the construction phase. If any archaeological finds or features are exposed, a re-assessment of the site may be required.
- Reconnaissance excavation of the possible grave must be undertaken to assess whether it is indeed a grave. This excavation can only take place once a permit from AMAFA has been received. Should suitable evidence for the existence of a grave be found (i.e. coffin fragments, burial pits, skeletal remains etc.) the excavation hole must be backfilled and a full grave relocation process undertaken.

4.2.9 Site BH9

4.2.9.1 Site Coordinates and Description

28.22662 S

29.41266 E

A single Stone Age lithic was exposed in the earthworks on the side of the road. The site is located close to a small stream. No other Stone Age artefacts could be observed in the direct vicinity, and as such the site must be viewed as a findspot.



Plate 14 BH9. The arrow indicates the approximate spot where the lithic was observed.



Plate 15 Close-up view of the artefact.

4.2.9.2 Site Significance

The findspot itself does not have any significance as it is an isolated find with no other archaeological material evident. However, it is not impossible to find stratified deposit in the substratum. As a result the site has **Low Significance**.

4.2.9.3 Mitigation

If Alternative 3 is approved, **Site BH9** will be impacted upon. The following mitigation measures are recommended:

- A watching brief is proposed to monitor the site during the construction phase. If any archaeological finds or features are exposed, a re-assessment of the site may be required.

4.2.10 Site BH10

4.2.10.1 Site Coordinates and Description

28.21216 S

29.47314 E

A number of stone foundation structures are located on a west-facing slope overlooking a non-perennial stream. These structures are located directly adjacent to the northern fence of the road.

4.2.10.2 Site Significance

The oldest available map on which the site is shown is the 2829AB GROOTHOEK Topographical Sheet that was printed in 1965. This map furthermore made use of aerial photography undertaken in 1955. The Harrismith sheet of the 1:125 000 series undertaken of the Orange Free State, and which was surveyed in 1908, reveals that the site did not exist as early as that (National Archives, Maps, 3/671).

The topographical sheet shows the site to have been a school. An archival file located in the Free State Archives mentions the existence of the so-called Fullerton Native Farm School, also known as the Nelsonskop Berlin Mission School (VAB, 1/1/111, N25/4/3). As

this file contains documents and reports of the school for the period 1930 to 1961, it is safe to say that the school was probably established in 1930. The site is therefore older than 60 years and protected by legislation.

Site BH10 is of **Low to Moderate Significance**.



Plate 16 One of the rectangular foundation structures can be seen in the foreground.

4.2.10.3 Mitigation

Even if Alternative 3 is approved, the site's location on the outside of the road fence means that if the development remains within the road servitude indicated by these fences, no impact is expected.

- No mitigation measures are required.

If any impact is expected to take place in closer proximity to the site (i.e. the removal of the existing fences), the following mitigation measures are required:

- The site must be documented in the form of photographs and scaled layout plans.

- After documentation, a destruction permit must be applied for from AMAFA. The site may only be disturbed or destroyed once a permit has been issued.

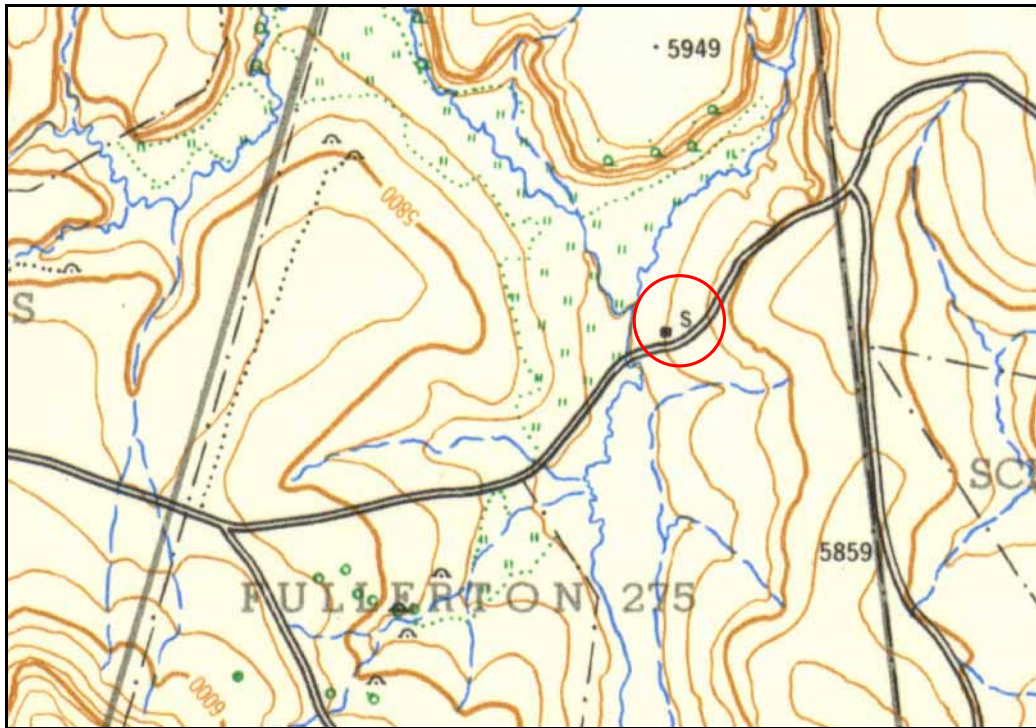


Figure 12 Enlarged section of the 2829AB GROOTHOEK Topographical Map, surveyed in 1964 and printed in 1965. The aerial photography used in the production of the map was taken in 1955. Note that **Site BH10** (marked in red) is indicated as a school.

4.2.11 Site BH11

4.2.11.1 Site Coordinates and Description

28.19933 S

29.55948 E

The site consists of a reinforced concrete bridge over the Wilge River. The bridge was located on the road between Collins Pass and Harrismith, on what used to be Chatsworth 388 (the section on which the bridge is located is today known as Wilgerivier 319).

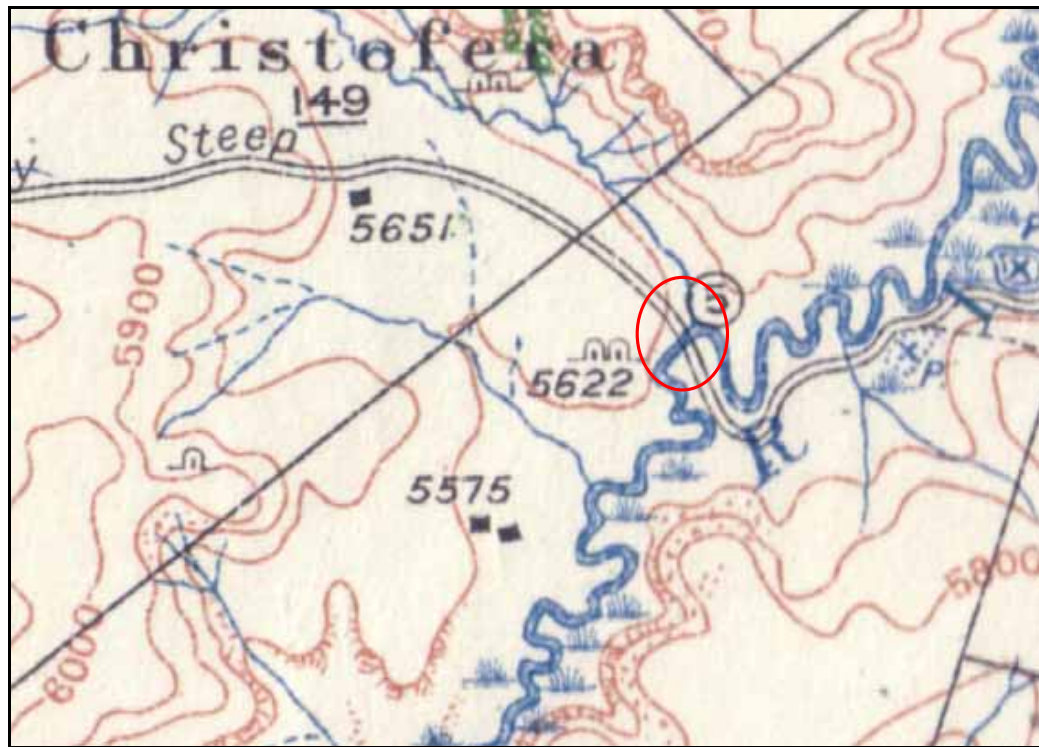


Figure 13 Enlarged section of the HARRISMITH sheet of the 1:125 000 map series surveyed in 1908 and printed in 1912. The drift existing at the time is marked in red.

Comparing the map that was surveyed in 1908 (National Archives, Maps, 3/671) with the topographical map that was surveyed in 1964, it becomes evident that the bridge was not constructed over the original drift, but slightly west of it. During 1908 the drift was described as being "much used".

During the mid-1920s a number of bridges were constructed in the Orange Free State by the Union of South Africa's Public Works Department, who were based at the Union Buildings in Pretoria. The bridge at **Site BH11** is one of these constructions.

Once the decision was made for a bridge to be constructed at Chatsworth, an on-site survey and assessment of all the possible sites for the construction was undertaken. The assessment was undertaken by B. Talbot. His report is dated 26 September 1925.

The construction of the bridge was put out on tender, and the tender advertisement was published in the Government Gazette of 29 January 1926. Ten tenders were received by the Public Works Department. The companies who had tendered for the bridge construction were derived from all over South Africa. The tender of John Littlejohns, whose tendered amount of £1427 17s was the lowest, was subsequently accepted. Littlejohns officially took over the construction site on 17 May 1926 (PWD, 2954, 11184).

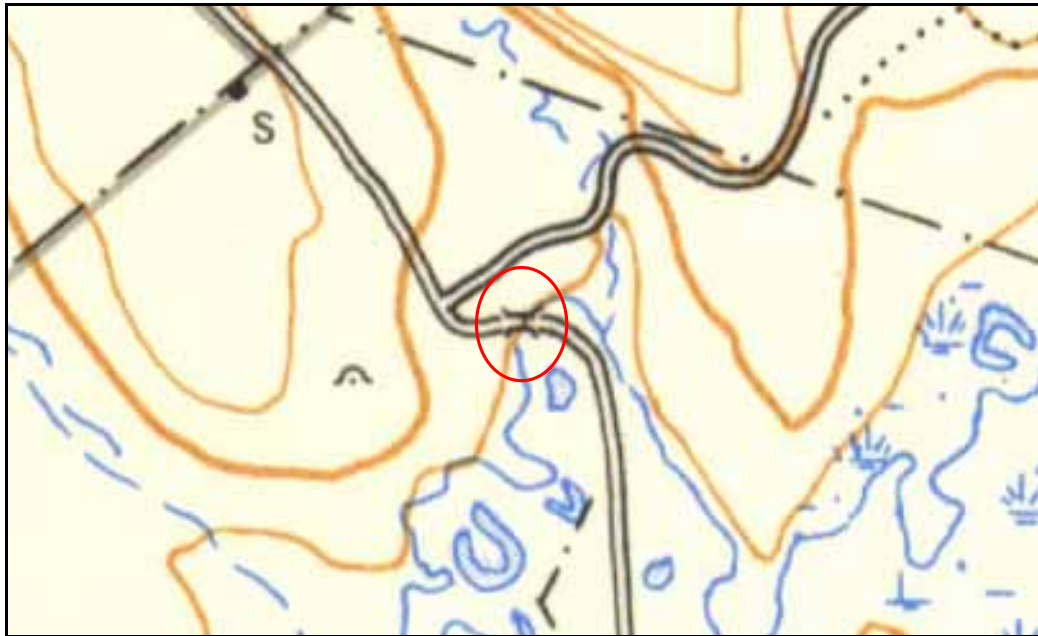


Figure 14 Enlarged section of the 2829BA SANTIAGO Topographical Map, surveyed in 1964 and printed in 1965. The aerial photography used in the production of the map was taken in 1955. Note that the bridge is marked in red.



Plate 17 The bridge at present.

| | |
|---|------------|
| ★ Reinforced Concrete Bridge over the Wilge River, farm Chatsworth No. 388, road Collins Pass to Harrismith | Harrismith |
| ★ Reinforced Concrete Bridge over the Wilge River, farm Montreal No. 367, road Harrismith to Brandon's Pass | Harrismith |

Figure 15 Copy of the Government Gazette tender notice, dated 26 January 1926.

The account for the construction was finalised on 10 September 1927, which means that the bridge must have been completed before this date (PWD, 2954, 11184).

4.2.11.2 Site Significance

The construction of the bridge commenced on 17 May 1926, and was completed before 10 September 1927. This means that the bridge is older than 60 years, and as a result protected by the legislation. The bridge can therefore not be altered, disturbed or demolished without a permit issued by the heritage authority.

Although the bridge is older than 60 years, and represents an infrastructural element of the area's transport development history, a number of such bridges were constructed during the 1920s. As a result the bridge can not be seen as unique.

The site is given a **Low to Moderate** significance rating.

4.2.11.3 Mitigation

If Alternative 3 is approved, **Site BH11** will be impacted upon. As the bridge was completed during 1927, it is older than 60 years. The following mitigation measures are recommended:

- The site must be documented in the form of photographs and scaled layout plans. In this regard, the available blueprints will already provide a basis for documentation.
- After documentation, a destruction permit must be applied for from AMAFA. The bridge may only be disturbed or destroyed once a permit has been issued.

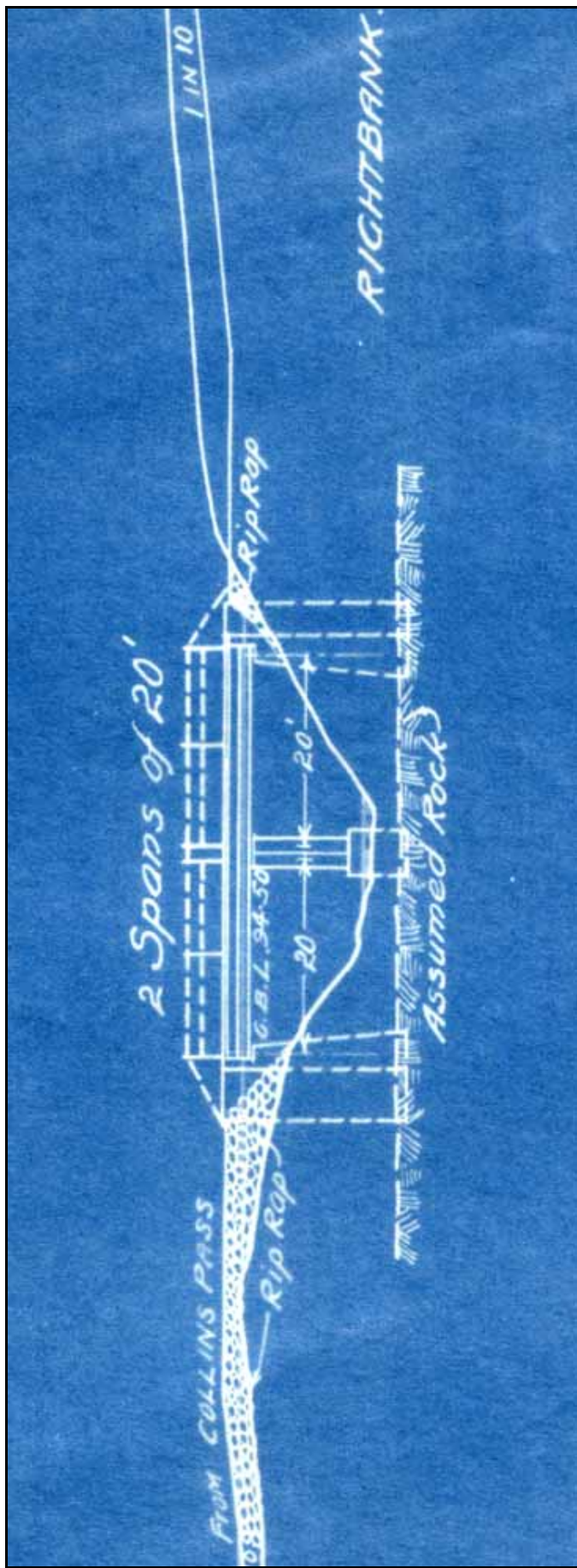


Figure 16 Blueprint for the Chatsworth bridge, dated 28 September 1925.



Plate 18 One of the bollards that is found at both ends of the bridge.

4.2.12 Site BH12

4.2.12.1 Site Coordinates and Description

28.33022 S

29.28086 E

Cemetery containing approximately 15 graves. The graves are all orientated along the east-west axis, while the dressings are predominantly oval-shaped and stone-packed.

The 1965 2928AD VAN REENEN Topographical Sheet indicates the existence of four huts in the general vicinity of the cemetery. It is possible for the cemetery to be associated with the huts.

The cemetery is situated approximately 25 meters to the west of the existing fencing along the road. As a result no impact is expected on the graves.



Plate 19 General view of cemetery.

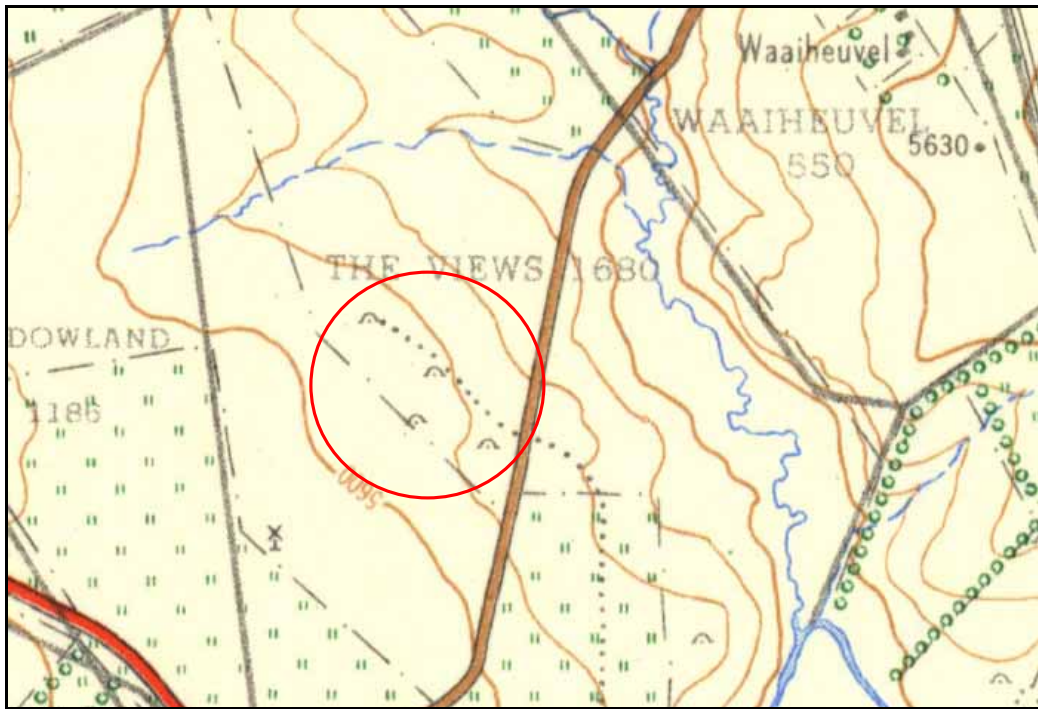


Figure 17 Enlarged section of the 2829AD VAN REENEN Topographical Map, which dates from 1965. Four huts (indicated in red) are shown in the vicinity of the cemetery at **Site BH12**.

4.2.12.2 Site Significance

All graves and cemeteries possess high levels of emotional, religious and historical significance.

Site BH12 is of **High Significance**.

4.2.12.3 Mitigation

Site BH12 will not be impacted upon by the proposed development.

- No mitigation measures are required.

However, should this alignment change so that the road development will impact on the cemetery, the following mitigation measures will be required:

- Full grave relocation in accordance with all relevant legislation, including a detailed social consultation process.

4.2.13 Site BH13

4.2.13.1 Site Coordinates and Description

28.27766 S

29.32194 E

Cemetery containing approximately 12 graves. The dressings for approximately ten of these graves consist of stone-packed features without any formal headstones. The remaining two graves have formal cement headstones. All the graves are orientated along the east-west axis.

The 1965 2928AD VAN REENEN Topographical Sheet indicates the existence of a single hut in the general vicinity of the cemetery. It is possible for the cemetery to be associated with the hut.

The cemetery is approximately seven meters from the road fence.



Plate 20 A number of graves from **Site BH13** can be seen.

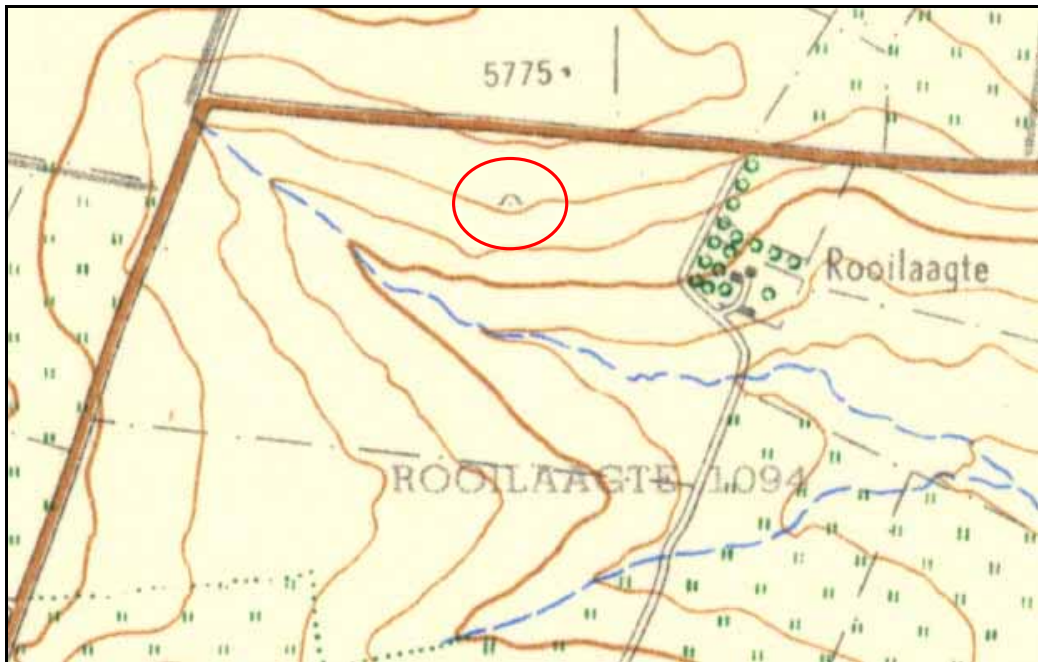


Figure 18 Enlarged section of the 2829AD VAN REENEN Topographical Map, which dates from 1965. A single hut is shown in the vicinity of the cemetery at **Site BH13**.

4.2.13.2 Site Significance

All graves and cemeteries possess high levels of emotional, religious and historical significance.

Site BH13 is of **High Significance**.

4.2.13.3 Mitigation

Site BH13 will not be impacted upon by the proposed development.

- No mitigation measures are required.

However, should this alignment change so that the road development will impact on the cemetery, the following mitigation measures will be required:

- Full grave relocation in accordance with all relevant legislation, including a detailed social consultation process.

4.2.14 Site BH14

4.2.14.1 Site Coordinates and Description

28.25089 S

29.37613 E

The site consists of a building that may be older than 60 years. The building is constructed of bricks and has a corrugated iron roof. The condition of the structure is poor, with all windows and doors missing.

The building is approximately 15 meters from the road fence, and as a result will not be impacted upon.

Although the exact age of the building is unknown, the available archival and historical maps provide a relative date.

The Harrismith sheet of the Orange Free State series in 1:125 000 scale (surveyed in 1908) does not show any buildings or structures in the vicinity of **Site BH14's** location. However, the 2928AD VAN REENEN Topographical Sheet (dated 1965) does show the building, and also indicates it to have been a shop.



Plate 21 The building from **BH14**.

It is evident that the building must have been built between 1908 and 1965. The possibility of it being older than 60 years appears to be good.

4.2.14.2 Site Significance

As the available cartographic data could not provide an exact date for the building, the significance assessment was based on the assumption that the building is indeed more than 60 years old. As a result **Site BH14** is given a **Low to Moderate Significance**.

4.2.14.3 Mitigation

Site BH14 will not be impacted upon by the proposed development.

- No mitigation measures are required.

However, should this alignment change so that the road development will impact on the building, the following mitigation measures will be required:

- The site must be documented in the form of photographs and scaled layout plans.
- After documentation, a destruction permit must be applied for from AMAFA. The bridge may only be disturbed or destroyed once a permit has been issued.



Figure 19 Enlarged section of the 2829AD VAN REENEN Topographical Map, which dates from 1965. **Site BH14** is marked with a red circle.

4.2.15 Site BH15

4.2.15.1 Site Coordinates and Description

28.27342 S

29.41033 E

The site consists of an upright boulder associated with a flat stone on which the following inscription was made: "MJ 1985". The upright boulder itself bears another inscription, and although it is quite weathered seems to read "15-12-85".

The inscriptions and stones seem to indicate the presence of a grave or memorial to a deceased.

The site is located approximately 12 meters from the road fence.

4.2.15.2 Site Significance

Depending on whether the site represents a grave or simply a memorial, the significance can vary considerably. For the moment a worst case scenario will be assumed, namely that the site represents a grave, and therefore is of **High Significance**.

4.2.15.3 Mitigation

Site BH14 will not be impacted upon by the proposed development.

- No mitigation measures are required.

However, should this alignment change so that the road development will impact on the site, the following mitigation measures will be required:

- Social consultation must take place to evaluate the site in terms of the existence of a grave in this locality. Should the feature be confirmed as a grave site, a full grave relocation process must be undertaken in accordance with the relevant legislation.



Plate 22 The upright stone with a number of loose stones packed at its base.



Plate 23 Flat stone bearing an inscription.

4.2.16 Site BH16

4.2.16.1 Site Coordinates and Description

28.27338 S

29.41188 E

A single rectangular foundation structure was observed here. The structure is situated to the south of the road, and directly adjacent to the fence.



Plate 24 The position of the foundation structure is indicated with an arrow. The person is standing on the road side of the fence.

4.2.16.2 Site Significance

None of the available cartographic material show a structure in this vicinity. **BH16** is of **No Significance**.

4.2.16.3 Mitigation

No mitigation measures are required.

4.2.17 Site BH17

4.2.17.1 Site Coordinates and Description

28.27435 S

29.41327 E

The site consists of a reinforced concrete bridge over the Wilge River at a place known as Schaapdrift. The bridge is located on what used to be the road between Ladysmith and Harrismith.

Comparing the map that was surveyed in 1908 (National Archives, Maps, 3/671) with the topographical map dating from 1965, it becomes evident that the bridge was not constructed over the original drift, but a short distance south of it. The 1908 map also indicates that the drift over which the road crossed at the time, was "much used."

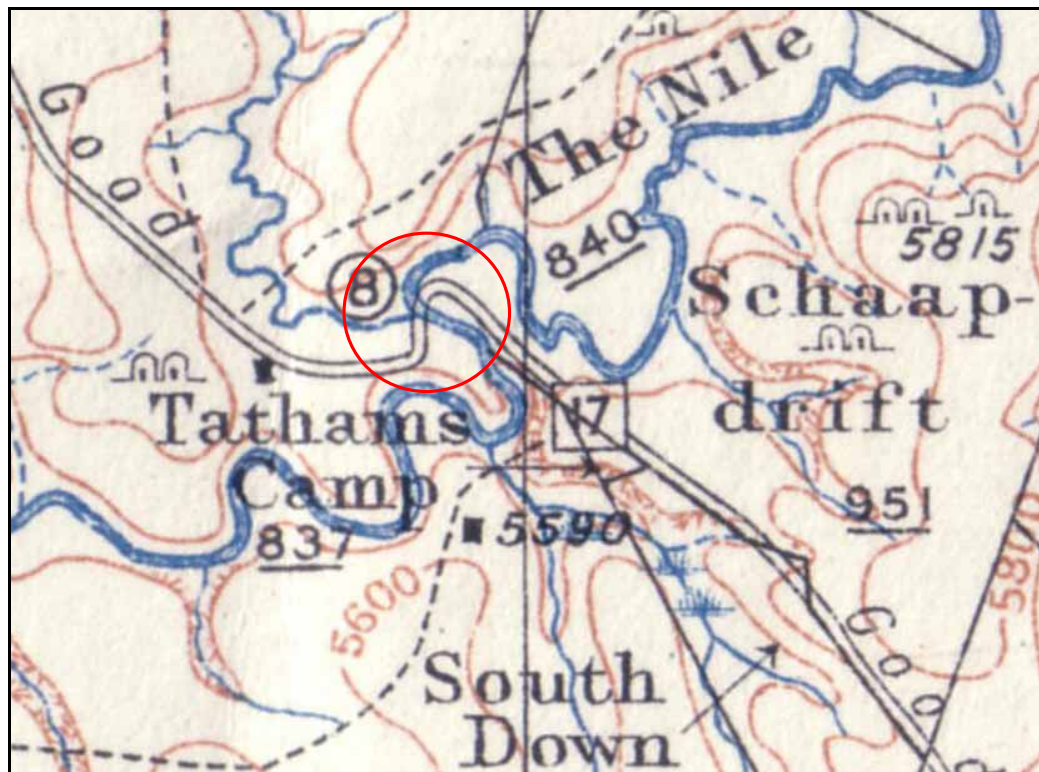


Figure 20 Enlarged section of the HARRISMITH sheet of the 1:125 000 map series surveyed in 1908 and printed in 1912. The map shows a drift over the Wilge River (marked in red).

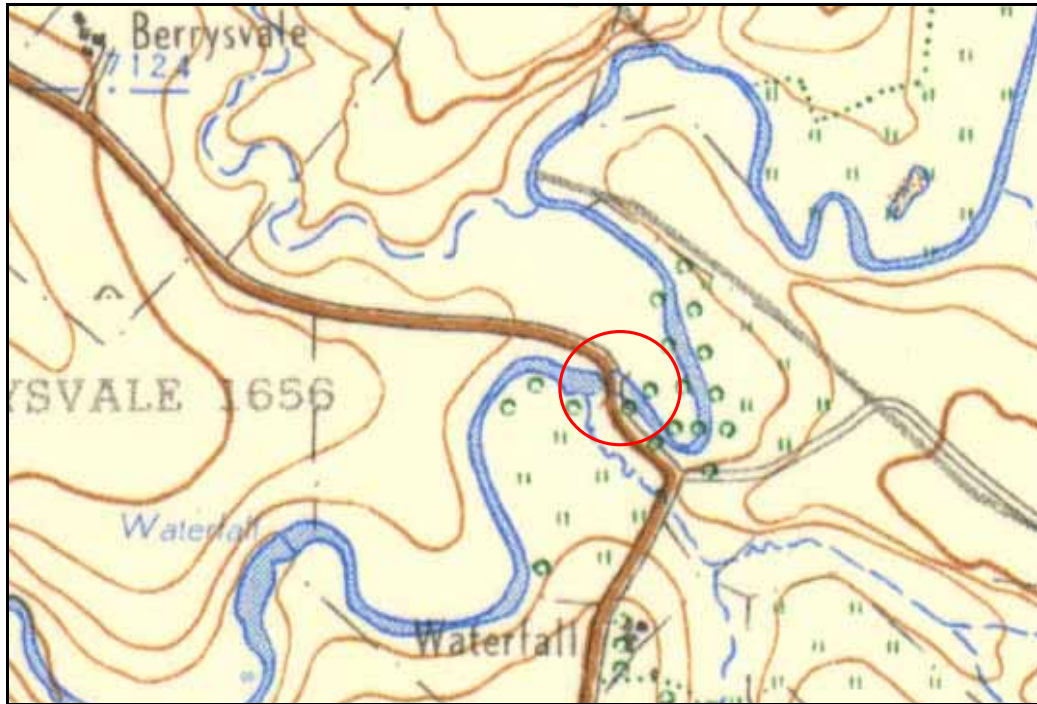


Figure 21 Enlarged section of the 2829AD VAN REENEN Topographical Map, dating from 1965. The bridge is marked in red.

During the mid-1920s a number of bridges were constructed in the Orange Free State by the Union of South Africa's Public Works Department, who were based at the Union Buildings in Pretoria. The bridge at Schaapdrift represents one of these.

Once the decision was made for a bridge to be constructed at Schaapdrift, an on-site engineering survey and assessment of all the possible sites for such a bridge was undertaken by none other than one of the founding fathers of Southern African Archaeology, C. (Clarence) Van Riet Lowe. The famous archaeologist and later Director of the Archaeological Bureau of the Department of Interior started his career in Civil Engineering (Malan, 1962). Malan (1962) also shows that during 1923-1928 Van Riet Lowe had been in charge of bridge construction in the Orange Free State, which included bridges over the "Wilger" (sic) river. In 1931, and before becoming Director of the Archaeological Bureau, Van Riet Lowe was appointed Chief Engineer of the Public Works Department.



Figure 22 Clarence van Riet Lowe (Malan & Cooke, 1962).

The construction of the bridge was put out on tender, and the tender advertisement was published in the Government Gazette during December 1924 (PWD, 2267, 7954).

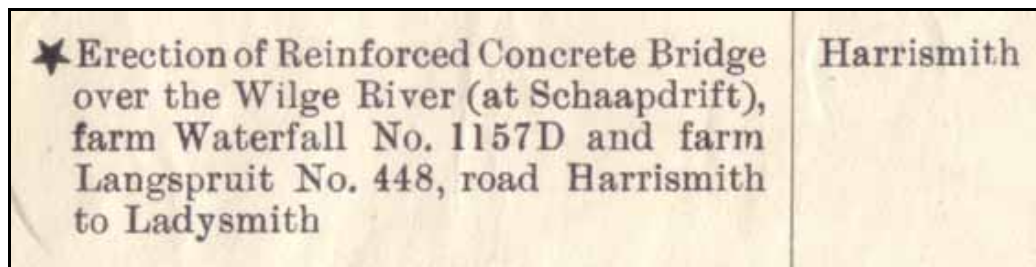


Figure 23 Copy of the Government Gazette tender notice, dated December 1924.

Eight tenders were received by the Public Works Department. The companies who had tendered for the bridge construction were derived from all over South Africa. The

Pretoria firm, Oomkens & Schalles, who had submitted the second lowest tender, was appointed to undertake the work. Their tendered amount was £2759.

The company was officially appointed on 20 March 1925, while the construction site was handed over to the construction company on 19 May 1925.

The bridge appears to have been completed during or before 1928.



Plate 25 Present-day view of the bridge at **Site BH18**.

4.2.17.2 Site Significance

The construction of the bridge during the mid-1920s means that the bridge is older than 60 years, and as a result protected by the legislation. The bridge can therefore not be altered, disturbed or demolished without a permit issued by the heritage authority.

The bridge is more unique than the one from **Site BH11**. This is because it is a larger, more imposing structure consisting of two supports and three spans. Furthermore, the association of the bridge with C. Van Riet Lowe also supports a higher significance.

The site is given a **Moderate** to **High Significance** rating.

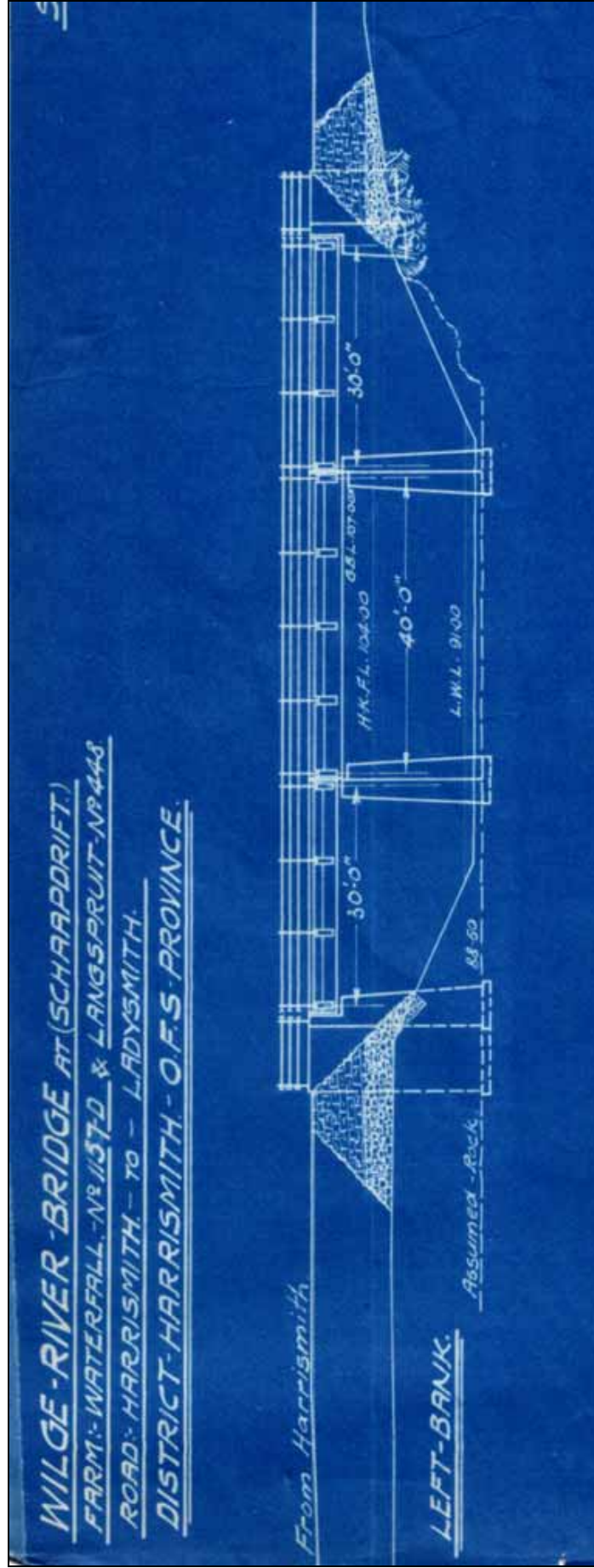


Figure 24 The original blueprint of the bridge at Schaapdrift, dated 31 January 1924.

4.2.17.3 Mitigation

Site BH17 will be impacted upon. As the bridge was completed during or before 1928, it is older than 60 years and protected by legislation. The following mitigation measures are recommended:

- If possible, the site should be preserved *in situ*. This can be accomplished by changing the existing route slightly.
- Should the bridge be preserved, a plaque should be put up on the bridge containing the history of the bridge. This can be an added benefit to the growing tourism industry in the area.

4.2.18 Site BH18

4.2.18.1 Site Coordinates and Description

28.30046 S

29.48100 E

The site consists of a single oval-shaped stone feature. The feature is approximately three meters in diameter, and some 11 meters from the road fence.



Plate 26 Small oval-shaped feature.

4.2.18.2 Site Significance

BH18 is of **No Significance**.

4.2.18.3 Mitigation

No mitigation measures are required.

4.2.19 Site BH19

4.2.19.1 Site Coordinates and Description

28.35426 S

29.55823 E

The site consists of numerous circular Late Iron Age stone enclosures located in a valley. The existing gravel road transects the site and these enclosures were observed on both sides of the road.

Although an inspection of the gravel road and its sides were undertaken for a large portion of the site, no archaeological deposit could be identified.



Plate 27 General view of the site from the north-west.

4.2.19.2 Site Significance

The site represents the most substantial Late Iron Age site located during the present survey, and apart from the road intrusion is well preserved.

BH19 is of **Moderate Significance**.

4.2.19.3 Mitigation

Site BH19 will be impacted upon. Since no stone structures are situated close enough to the road for them to be impacted upon, the following mitigation measure is still required:

- The fact that the road transects the settlement means that a watching brief is required to monitor the site during the construction phase. If any archaeological finds or features are exposed, a re-assessment of the site may be required.

4.2.20 Site BH20

4.2.20.1 Site Coordinates and Description

28.42071 S

29.63094 E

The site consists of rough stonewall foundations situated along the western slope of a ridge. The features are located above the road and seem to be associated with the historic-recent past.

The road is not expected to impact on the site.

4.2.20.2 Site Significance

The site is poorly preserved and lacks in formal layout and structure. **Site BH20** is of **No Significance**.

4.2.20.3 Mitigation

No mitigation measures are required.

4.2.21 Site BH21

4.2.21.1 Site Coordinates and Description

28.43073 S

29.63080 E

This is the location of two stone structures. One of the structures is rectangular in form, while the other is circular. This is characteristic of the Historic/Recent Period (Late 1900s) wherein traditional and western building methods were combined. The site is interpreted as the remains of a farm worker dwelling.

The site is located adjacent to the road fence.



Plate 28 The two stone structures can be seen.

4.2.21.2 Site Significance

The site appears to be associated with the 1900s, and only its foundation structures still remain preserved. No associated cultural material could be observed.

Site BH21 is of **Low Significance**.

4.2.21.3 Mitigation

The site is located adjacent to the outside fence, and should the development remain within the road servitude indicated by these fences, no impact is expected.

- No mitigation measures are required.

If any impacted is expected to take place in the vicinity of the site (i.e. the removal of the existing fences), the following mitigation measures are required:

- Field mapping of site.

4.2.22 Site BH22

4.2.22.1 Site Coordinates and Description

28.43361 S

29.63091 E

A cemetery containing five stone-packed graves are located approximately 15 meters from the road fence.

The cemetery is associated with buildings that appear to be a school.



Plate 29 **BH22.** The arrow indicates the position of the five stone-packed graves.

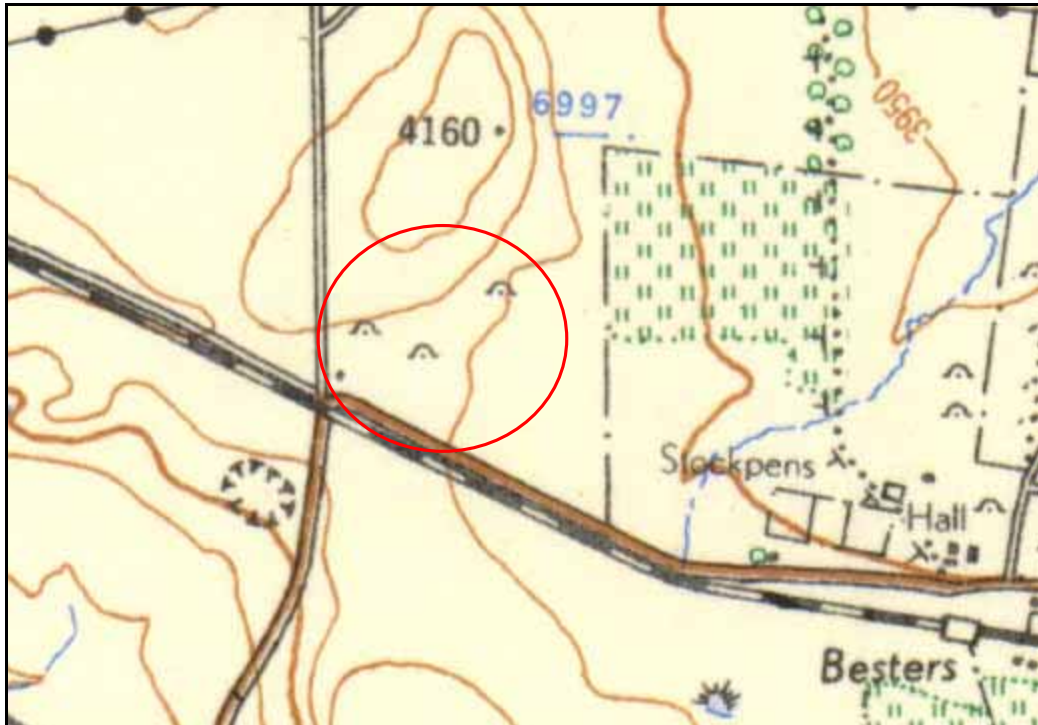


Figure 25 Enlarged section of the 2829BC BESTERS Topographical Map. The sheet is the First Edition and dates from 1963. The map shows one building and three huts in the vicinity of **Site BH22**.

Three huts and one building are marked on the old topographical sheet dating from 1963. It seems likely that the cemetery can be associated with these features, rather than the school presently located in the area.

4.2.22.2 Site Significance

All graves and cemeteries possess high levels of emotional, religious and historical significance.

BH22 is of **High Significance**.

4.2.22.2 Mitigation

Site BH22 will not be impacted upon by the proposed development.

- No mitigation measures are required.

However, should this alignment change so that the road development will impact on the cemetery, the following mitigation measures will be required:

- Full grave relocation in accordance with all relevant legislation, including a detailed social consultation process.

4.2.23 Site BH23

4.2.23.1 Site Coordinates and Description

28.26431 S

29.51550 E

The site consists of two stone foundation structures located at the north-eastern foot of a small rise. The structures appear to be historic-recent worker housing.

At present the age of the structures are unknown. The possibility exists for them to be older than 60 years. No cultural material was observed in the surrounding area.

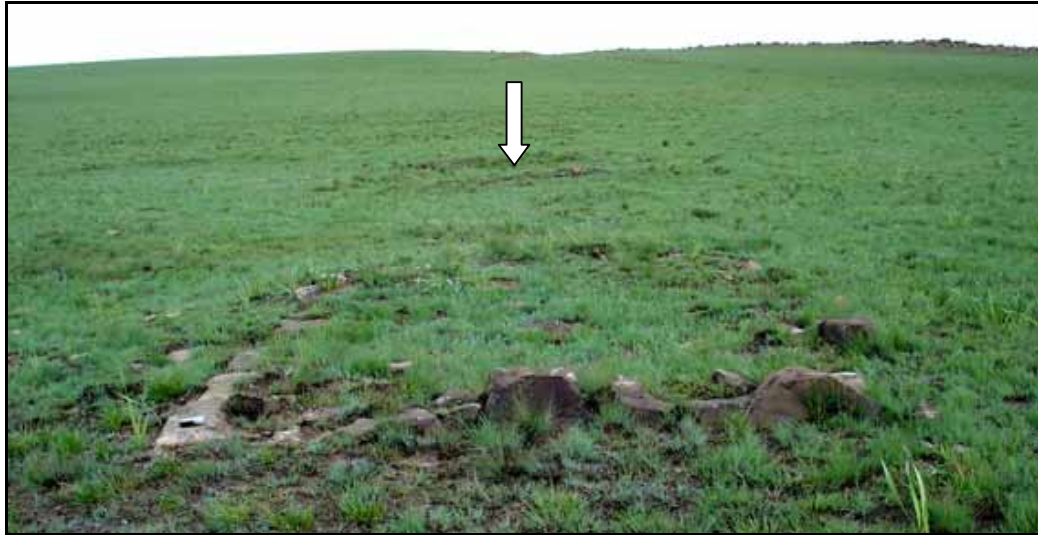


Plate 30 **BH23.** The rectangular structure is visible in the foreground, while the arrow indicates the circular structure.

4.2.23.2 Site Significance

As the available cartographic could not provide a date for the site, a worst case scenario was used to evaluate the site's significance. In this scenario it was assumed that the structures are older than 60 years, thereby providing the site with a **Low to Moderate Significance** rating.

Should the structures not be older than 60 years, the site will have no heritage significance.

4.2.23.2 Mitigation

If Alternative 1 and 2 are approved, the possibility exists for **Site BH23** to be impacted upon. The possibility also exists for the structures to be older than 60 years.

Should the site be impacted upon, the following recommendations are required:

- The site must be documented in the form of photographs and scaled layout plans.
- After documentation, a destruction permit must be applied for from AMAFA. The structures may only be disturbed or destroyed once a permit has been issued.

4.2.24 Site BH24

4.2.24.1 Site Coordinates and Description

28.29354 S

29.47449 E

The site consists of a small circular stone structure located on a dolerite dyke. No cultural material was observed in the surrounding area.



Plate 31 The small stone circle is visible adjacent to the dolerite dyke.

The structure is located in a strategic location just before the start of the De Beers Pass. The desktop study has shown the De Beers Pass to have already existed in 1847 (Steytler, 1932). The strategic importance of the De Beers Pass, as well as its location on what had been for a long time the boundary between the Boer Republic of the Orange Free State and the British Colony of Natal, has led various military and police posts to be established in the vicinity.

Furthermore, during the Anglo Boer War of 1899-1902, the passes over the Drakenberg were manned by both Boer and British forces during various stages of the conflict.

Breytenbach (1969), for example, indicates that at the start of the war the Harrismith Commando manned the De Beers Pass.

As the site is located directly in the middle of the existing road and the proposed line deviation, the development will not impact on the site.

4.2.24.2 Site Significance

Based on the strategic importance of the De Beers Pass, the structure is likely a military feature and is certainly older than 60 years. However, it consists of a small stone circle, without any cultural material or other features visible in the direct vicinity. The site is of **Low to Moderate Significance**.

4.2.24.3 Mitigation

Site BH24 will not be impacted upon by the proposed development.

- No mitigation measures are required.

5. COMPARISON OF THE ROAD ALTERNATIVES IN TERMS OF HERITAGE

As mentioned elsewhere, the study area included three road alternatives as well as a set of fixed roads not dependant on the alternatives.

The system used to evaluate the heritage sensitivity of the different routes, was based on the use of the two very important aspects of each heritage site, namely its significance and development impact.

During the field survey five levels of significance were identified. For the aims of evaluating the different routes, each of the significance levels was provided with a value of between 0 and 100:

- No Significance - (0)
- Low Significance - (25)
- Moderate Significance - (50)
- High Significance - (75)
- Very High Significance - (100)

The same was done in terms of the three different levels of development impact expected. In this case the values were between 0 and 70:

- No Impact Expected – (0)
- Possible Impact Expected (Uncertainty Exists) - (35)
- Definite Impact Expected – (70)

All this data was provided in table form for all of the sites located in each specific route. The value totals were used to grade the different routes in terms of heritage significance.

5.1 Fixed Roads

| SITE NUMBER | SITE SIGNIFICANCE | MARK | DEVELOPMENT IMPACT | MARK | SUBTOTAL |
|-------------|-------------------|------|--------------------|--------------------|----------|
| Site BH12 | High | 75 | No | 0 | 75 |
| Site BH13 | High | 75 | No | 0 | 75 |
| Site BH14 | Low to Moderate | 50 | No | 0 | 50 |
| Site BH15 | High | 75 | No | 0 | 75 |
| Site BH16 | No | 0 | No | 0 | 0 |
| Site BH17 | Moderate to High | 75 | Yes | 70 | 145 |
| Site BH18 | No | 0 | No | 0 | 0 |
| Site BH19 | Moderate | 50 | Yes | 70 | 120 |
| Site BH20 | No | 0 | No | 0 | 0 |
| Site BH21 | Low | 25 | No | 0 | 25 |
| Site BH22 | High | 75 | No | 0 | 75 |
| | | | | ROUTE TOTAL | 640 |

5.2 Road Alternatives

Alternative 1

| SITE NUMBER | SITE SIGNIFICANCE | MARK | DEVELOPMENT IMPACT | MARK | SUBTOTAL |
|-------------|-------------------|------|--------------------|------|----------|
| Site BH2 | Low | 25 | Yes | 70 | 95 |
| Site BH3 | High | 75 | No | 0 | 75 |

| | | | | | |
|----------|----------|----|-----|--------------------|-----|
| Site BH4 | Low | 25 | No | 0 | 25 |
| Site BH5 | Low | 25 | Yes | 70 | 95 |
| Site BH6 | Moderate | 50 | No | 0 | 50 |
| Site BH7 | High | 75 | Yes | 70 | 145 |
| Site BH8 | High | 75 | Yes | 70 | 145 |
| | | | | ROUTE TOTAL | 630 |

Alternative 2

| SITE NUMBER | SITE SIGNIFICANCE | MARK | DEVELOPMENT IMPACT | MARK | SUBTOTAL |
|-------------|-------------------|------|--------------------|--------------------|----------|
| Site BH1 | Low | 25 | No | 0 | 25 |
| Site BH23 | Low to Moderate | 50 | Maybe | 35 | 85 |
| | | | | ROUTE TOTAL | 110 |

Alternative 3

| SITE NUMBER | SITE SIGNIFICANCE | MARK | DEVELOPMENT IMPACT | MARK | SUBTOTAL |
|-------------|-------------------|------|--------------------|--------------------|----------|
| Site BH9 | Low | 25 | Yes | 70 | 95 |
| Site BH10 | Low to Moderate | 50 | No | 0 | 50 |
| Site BH11 | Low to Moderate | 50 | Yes | 70 | 120 |
| | | | | ROUTE TOTAL | 265 |

Alternatives 1 & 2

| SITE NUMBER | SITE SIGNIFICANCE | MARK | DEVELOPMENT IMPACT | MARK | SUBTOTAL |
|-------------|-------------------|------|--------------------|--------------------|----------|
| Site BH24 | Low to Moderate | 50 | No | 0 | 50 |
| | | | | ROUTE TOTAL | 50 |

Using the results of the evaluation, it is possible to say that Alternative 1 is the most sensitive with a score of 630, followed by Alternative 3 with a score of 265. The least sensitive alternative in terms of heritage is Alternative 2 with a score of 110.

6. HERITAGE REQUIREMENTS IN TERMS OF THE NATIONAL HERITAGE RESOURCES ACT AND THE KWAZULU-NATAL HERITAGE ACT

The KwaZulu-Natal Heritage Act as well as the National Heritage Resources Act provide exactly similar requirements for Heritage Impact Assessment reports. The requirements not already addressed in the report will be undertaken here.

6.1 "The identification and mapping of all heritage resources in the area affected"

This requirement has been suitably addressed in **Section 4 Findings**. With the GPS coordinates obtained from the field, the different sites were individually plotted using Arcview 8.1 GIS Software. Refer **Annexure B Site Distribution Map**.

6.2 "A(a)n evaluation of the impact of the development on heritage resources relative to the sustainable social and economic benefits to be derived from the development;"

Please note that all information contained in this section was taken from the Scoping Report compiled by the Bramhoek Consultants Joint Venture.

6.2.1 Economic Activity

Socio-economic data has been obtained from Statistics SA (<http://www.statssa.gov.za>), based on Census 2001 data. For comparative purposes, data is presented for the Maluti a Phufong Local Municipality, Phumelela Local Municipality and the Emnambithi/Ladysmith Local Municipality.

6.2.1.1 Population size and density

Population size and density is presented in Figure 2-8 and 2-9 respectively. Population size within the three municipal areas are approximately 36 200, evenly distributed between the three local municipality (LM) areas.

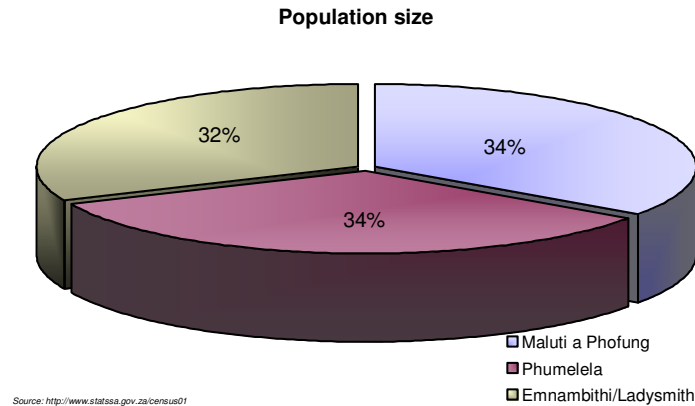


Figure 0-1: Population size per local municipal area

More people, however, reside per square kilometre (4.6 people / km²) within the Emnambithi (Ladysmith) Local Municipality than within the Maluti a Phufong and Phumelela Local Municipalities (3.9 people / km² and 2.8 people / km² respectively – **Figure 2-10**).

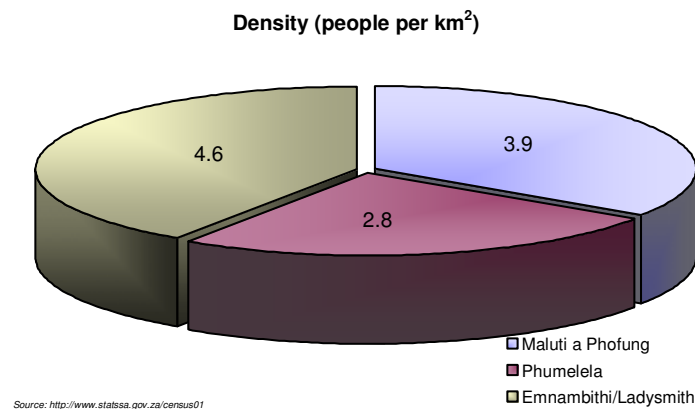


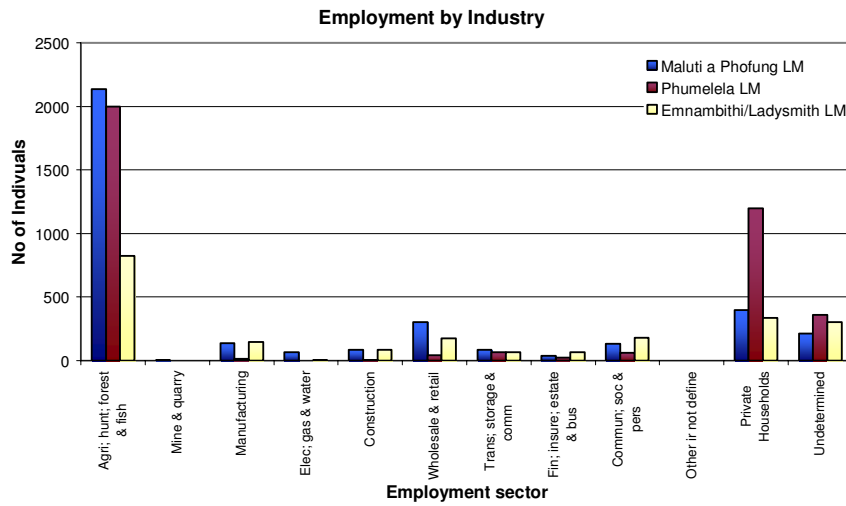
Figure 0-2: Population density per square kilometre

6.2.1.2 Employment Figures and Sectors

Unemployment within the three local municipalities is significantly higher than the national unemployment rate. Employment within the Free State Municipalities is marginally higher at 46 % and 53 % respectively. Less than 32% of residents within the Emnabithi Local Municipality are employed and more than 40 % economically inactive.

Employment sectors within the three local municipalities are indicated in **Figure 2-13** below. The predominant source of employment within all municipal areas is within the

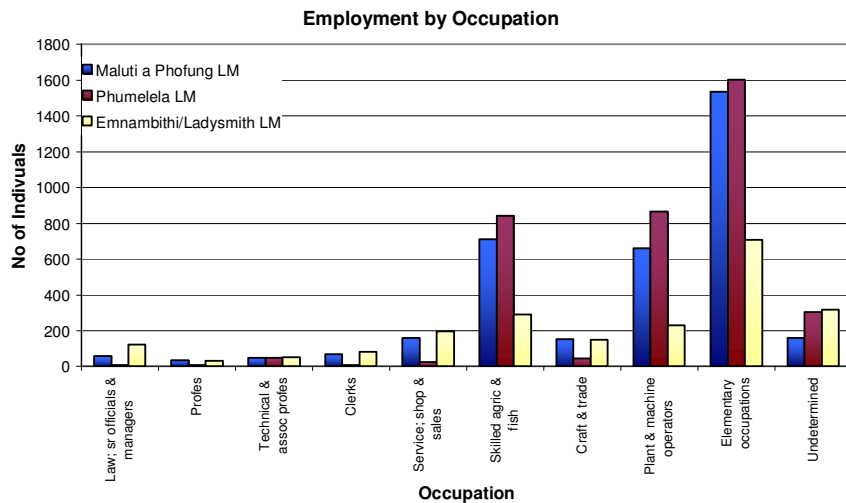
agricultural, forestry, hunting and fishing industries, followed by employment as domestics or gardeners.



Source: <http://www.statssa.gov.za/census01>

Figure 0-3: Employment by Sector within the Local Municipalities

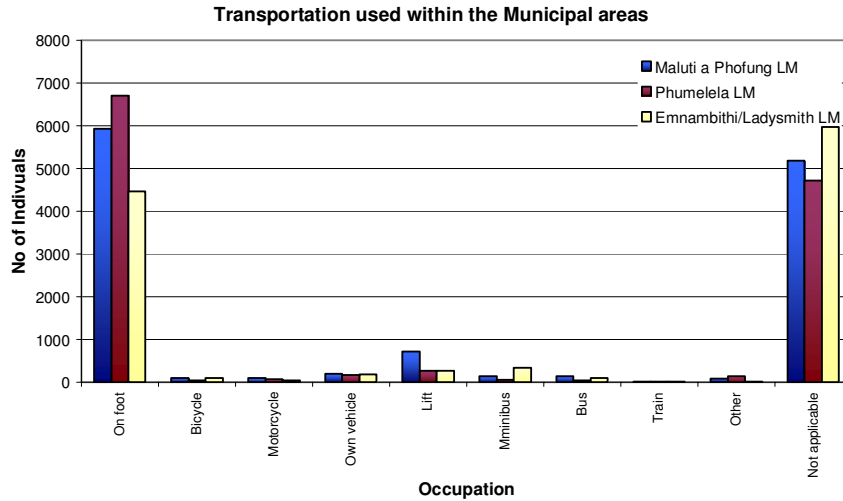
Skill levels within local residents are typically moderately skilled to skilled, with the majority of labourers employed as skilled agricultural labourers or plant and machine operators (**Figure 2-14**). This would indicate, on the whole, that Eskom would be able to extract a large proportion of their skilled labour (for all infrastructure projects) from the local communities.



Source: <http://www.statssa.gov.za/census01>

Figure 0-4: Employment by occupation within the Local Municipal areas

A large proportion of residents have no access to formal / public transport, and therefore travel predominantly by foot (**Figure 2-15**). This would indicate that the transport system within all municipal areas require upgrading and/or transformation.

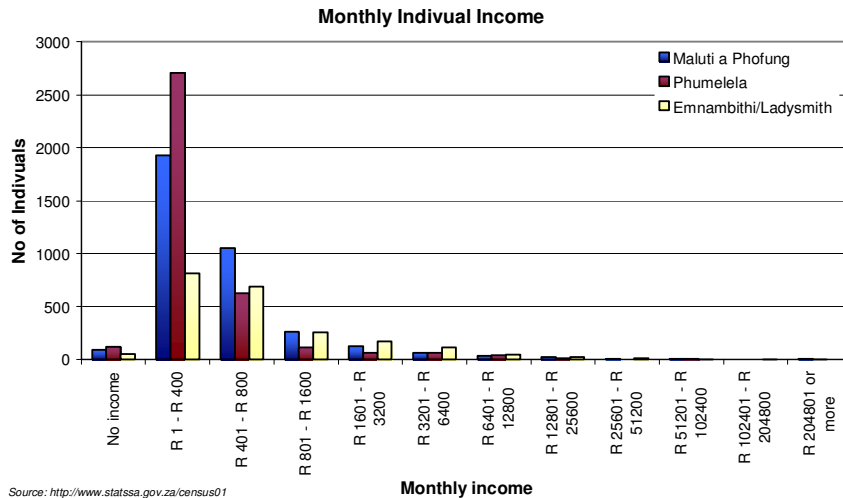


Source: <http://www.statssa.gov.za/census01>

Figure 0-5: Transportation utilised within the Local Municipal areas

6.2.1.3 Household and Individual Income

Monthly individual income is presented below in **Figure 2-16**. It is evident that that the majority of residents within all three municipal areas earn below R 800 per month.



Source: <http://www.statssa.gov.za/census01>

Figure 0-6: Monthly individual incomes per Local Municipal area

Annual Household income (**Figure 2-17**), when considering average household size per municipal area, indicates the average household income per annum is below R 20 000 per annum.

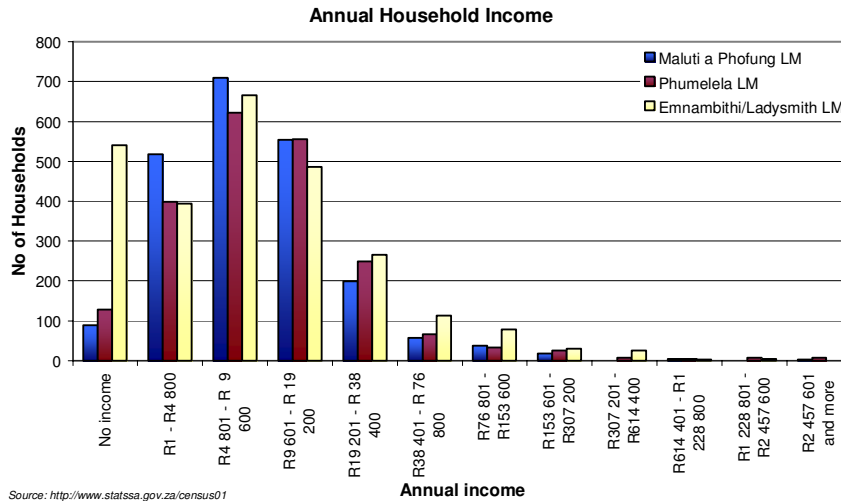


Figure 0-7: Annual Household income per Local Municipal Area

6.2.2 Expected Socio-Economic Benefits

The following general socio-economic benefits are expected from the project:

- Short-term employment
- Tourism benefit in that accessibility for tourists is increased
- General increased accessibility for local communities and residents

6.2.3 Comparison

Although a number of heritage sites were located during the fieldwork, the largest number of them is located outside the existing road servitude and as a result is not expected to be impacted upon. Many of the sites are also of no significance. Furthermore, mitigation measures have been proposed for the sites with low, moderate and high significance ratings. Should these mitigation measures be undertaken, it is believed that the impact of the proposed development will be minimised.

Should a comparison be drawn between the post-mitigation heritage resources and the socio-economic benefits envisaged from the project, it is quite clear that these benefits far outweigh any impact on the heritage resources base of the area.

6.3 “T(t)he results of consultation with communities affected by the proposed development and other interested parties regarding the impact of the development on heritage resources;”

Although a very detailed Public Participation Process took place for the Bramhoek Pumped Storage Scheme and its access roads (refer **Section 3.3**), the only concern raised during the entire Public Participation Process in terms of heritage was the one raised by Amafa aKwaZulu-Natali. Their concern was that as the roads may impact on the heritage resources of the area, a Heritage Impact Assessment would be required.

7. CONCLUSIONS AND GENERAL RECOMMENDATIONS

The study undertaken for this report resulted in the discovery of **twenty-four** sites.

Significance assessments for all these sites were undertaken. The impact of the development on each site as well as the required mitigation measures are also provided. Refer **Section 4.2 Survey Findings**.

Not subtracting in any way from the comprehensiveness of the fieldwork undertaken, it is necessary to realise that the heritage resources located during the fieldwork do not necessarily represent all the heritage resources located there. This may be due to various reasons, including the subterranean nature of some archaeological sites and dense vegetation cover. As such, should any heritage features and/or objects not included in the present inventory be located or observed, a heritage specialist must immediately be contacted. Such observed or located heritage features and/or objects may not be disturbed or removed in any way, which means that should such features or objects be exposed during any of the proposed activities, such activities must immediately stop.

Should any graves or cemeteries be observed, located or exposed, all activities in the vicinity of the located features must immediately stop. A heritage specialist must also immediately be contacted, and who after assessing the site would in consultation with the South African Heritage Resources Agency and/or Amafa aKwaZulu-Natali be able to make recommendations on the way to proceed.

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Relevant Archival Documents

National Archives, PWD, 2267, 7954

National Archives, PWD, 2954, 11184

National Archives, TAD, 264, A5703/12

Free State Archives, SOO, 1/1/111, N25/4/3

Archival Maps

National Archives, Maps, 1/56

National Archives, Maps, 3/500

National Archives, Maps, 3/671

National Archives, Maps, 3/1631 I

National Archives, Maps, 3/1873

ANNEXURE A - LOCALITY MAPS

ANNEXURE B – SITE DISTRIBUTION MAP

ANNEXURE C – LEGISLATIVE FRAMEWORK

LEGISLATIVE FRAMEWORK

South Africa has a number of legislative measures in place aimed at protecting its heritage resources. As the present project is located on KwaZulu-Natal and the Free State, the National Heritage Resources Act as well as the KwaZulu-Natal Heritage Act is of relevance.

1. KwaZulu-Natal Heritage Act

General protections

26. (1) Structures:

Any proposed demolition, addition or alteration of structures or parts thereof which are older than 60 years shall be subject to the following:

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- (a) thirty days prior to the commencement of such a proposed demolition a permit shall be applied for from *Amafa aKwaZulu-Natali*;
 - (b) the Council may at its own discretion and through publication of a notice in the *Provincial Gazette* lift this provision within a defined geographical area, or for certain defined categories of sites within a defined geographical area, when it is satisfied that heritage resources falling into the defined geographical area or category have been identified and are adequately provided for in terms of sections 19 to 25;
 - (c) should the Council believe it to be necessary it may, following a three-month notice period which will be published in the *Provincial Gazette*, withdraw or amend a notice which has previously lifted this provision;
 - (d) conditions stipulated in terms of permits issued under this provision shall be of such a nature so as to facilitate the recycling of historical building materials and the revision of design proposals;
 - (e) where a permit is refused, the Council shall within a three-month period give consideration to the protection of the site in terms of one of the formal classifications provided for in sections 19 to 25.
- (2) Graves of the Royal Family shall —
- (a) without the need for publication of a notice in the *Provincial Gazette*, enjoy protection equivalent to that of Heritage Landmark or Provincial Landmark provided for in terms of sections 19 and 20;
 - (b) be subject to the proviso that no permit shall be issued by *Amafa aKwaZulu-Natali* without prior knowledge of the reigning monarch and his advisors, and in terms of regulations prescribed in this Act.
- (3) Graves of victims of conflict
- No person shall damage, alter, exhume, or remove from its original position the grave of a victim of conflict, cemetery made up of such graves, or that part of a cemetery which contains such graves except after consultation with *Amafa aKwaZulu-Natali*, and in terms of regulations prescribed in this Act.
- (4) Traditional burial places
- (a) All other graves not otherwise protected by this Act and not located in formal cemeteries administered by local authorities, shall not be damaged, altered, exhumed, removed from their original positions, or otherwise disturbed except under the authority of a permit issued after consultation with *Amafa aKwaZulu-Natali*, and in terms of regulations prescribed in this Act.
 - (b) The Council shall only recommend that such a permit be issued once it has been satisfied that the applicant has made a concerted effort to contact and consult communities and individuals who by tradition have an interest in the graves and have reached agreements regarding the future thereof.
 - (c) Regulations shall provide a time period and minimum requirements for such consultation.
- (5) Battlefields and public monuments and memorials shall without the need to publish a government notice to this effect, be protected in the same manner as sites which are on the heritage register as established in section 2.
- (6) Archaeology, rock art, palaeontology, battlefields and meteorite sites
- (a) No person may destroy, damage, excavate, alter, write or draw upon, or otherwise disturb any archaeological, rock art, palaeontological, battlefield or meteorite site except under the authority of a permit issued by *Amafa aKwaZulu-Natali*, provided that *Amafa aKwaZulu-Natali* may, regarding archaeological sites, take account of existing small-scale agricultural activities.
 - (b) Upon discovery of archaeological or palaeontological material or a meteorite, a person engaged in small-scale agriculture shall immediately cease operations in the vicinity of such material and report their presence to *Amafa aKwaZulu-Natali*.
 - (c) After consultation with the owner, the Council may, by way of serving of a notice to that effect on an owner or other controlling authority, prevent what it considers to be inappropriate activities within 50 m of sites which contain rock art.
 - (d) No person may exhume, remove from its original position, otherwise disturb, damage, destroy, own or collect any archaeological or palaeontological object or material, or objects which the Council deems to be associated with a battlefield, or meteorite, except under the authority of a permit issued by *Amafa aKwaZulu-Natali*.
 - (e) No person may bring any equipment which assists in the detection of metals and archaeological and palaeontological objects and material, or excavation equipment onto an archaeological or palaeontological site or a battlefield, or use similar detection or excavation equipment for the recovery of meteorites, except under the authority of a permit issued by *Amafa aKwaZulu-Natali*.

2. National Heritage Resources Act 25 of 1999

The promulgation of the National Heritage Resources Act 25 of 1999 brings the conservation and management of heritage resources in South Africa on par with international trends and standards.

Section 38 (3) of the act provides an outline of ideally what should be included in a heritage report. The act states:

"(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."*

Replacing the old National Monuments Act 28 of 1969, the Heritage Resources Act offers general protection for a number of heritage related features and objects (see below).

Structures are defined by the Heritage Resources Act as *"...any building, works, device or other facility made by people and which is fixed to land, and includes any fixtures, fittings and equipment associated with it."* In section 34 of the Act the general protection for structures is stipulated. It is important to note that only structures older than 60 years are protected. Section 34(1) of the National Heritage Resources Act reads as follows: *"No person may alter or demolish any structure or part of a structure which is older than 60 years without a permit issued by the relevant provincial heritage resources authority."*

The second general protection offered by the Heritage Resources Act which is of relevance for this project, is the protection of **archaeological sites and objects (as well as paleontological sites and meteorites)**. Section 35(4) of the National Heritage Resources Act states that:

"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."*

In order to understand exactly what is protected, it is important to look at the definition of the concept "**archaeological**" set out in section 2(ii) of the Heritage Act:

- "(a) material remains resulting from human activity which are in a state of disuse and are in or on land and which are older than 100 years, including artefacts, human and hominid remains and artificial features and structures;*
- (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;*
- (c) wrecks, being any vessel or aircraft, or any part thereof, which was wrecked in South Africa, whether on land, in the internal waters, the territorial waters or in the maritime culture zone of the Republic, as defined respectively in sections 3, 4 and 6 of the Maritime Zones Act, 1994 (Act No. 15 of 1994), and any cargo, debris or artefacts found or*

*associated therewith, which is older than 60 years or which SAHRA considers to be worthy of conservation; and
(d) features, structures and artefacts associated with military history which are older than 75 years and the sites on which they are found;...*

The third important general protection offered by the Heritage Resources Act that is of importance here, is the protection of **graves and burial grounds**. Section 36(3) of the National Heritage Resources Act states that:

"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."*

Of importance as well is section 36 (5), which relates to the conditions under which permits will be issued by the relevant heritage authority should any action described in section 36 (3), be taken. Section 36(5) reads that:

"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."*

This section of the Act refers to graves and burial grounds which are older than 60 years and situated outside of a formal cemetery administered by a local authority.

Section 36 (6) of the act refers to instances where previously unknown graves are uncovered during development and other activities.

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