Archaetnos Culture & Cultural
Resource Consultants
BK 98 09854/23

A REPORT ON A BASIC HERITAGE ASSESSMENT FOR THE PROPOSED ESKOM FIBRE-GROBLERSHOOP 132 kV POWER LINE, NORTHERN CAPE PROVINCE

For:

Landscape Dynamics
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REPORT: **AE01456V**

by:

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DISCLAIMER:

Although all possible care is taken to identify all sites of cultural importance during the survey of study areas, the nature of archaeological and historical sites are as such that it always is possible that hidden or subterranean sites could be overlooked during the study. Archaetnos and its personnel will not be held liable for such oversights or for costs incurred as a result thereof.

The South African Heritage Resources Agency (SAHRA) or one of its subsidiary bodies needs to comment on this report and clients are advised not to proceed with any action before receiving these. It is the responsibility of the client to submit the report to the relevant heritage authority.

SUMMARY

Archaetnos cc was appointed by Landscape Dynamics to conduct Basic Heritage Assessment for the Eskom 132 kV power line between Fibre and Groblershoop. This is located in the Northern Cape Province.

A basic assessment entails the establishment of a broad framework of the potential heritage of an area. Two alternatives for the route were investigated.

The fieldwork undertaken revealed one sites of cultural heritage significance, but this is too far from any of the alternatives to be impacted on. A few stone tools were also identified out of context, but these are not important enough to warrant a change to the proposed line. It however has to be realized that during a basic assessment a detailed survey is not done and therefore these sites only are an indication of what is to be expected. Such sites should rather be avoided during development. If necessary it should be mitigated during construction activities.

From a heritage perspective, there is no specific preference for any of the two alternatives and therefore any one may be used. Both proposed routes will have no impact on the identified heritage site. It is therefore proposed that once a final decision has been made and the pylon positions are known, a full heritage impact assessment be done in order to determine the actual impact.

It should also be noted that the subterranean presence of archaeological and/or historical sites, features or artifacts is always a distinct possibility. Care should therefore be taken when the development commences that if any of these are discovered, a qualified archaeologist be called in to investigate.

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1. INTRODUCTION

Archaetnos cc was appointed by Landscape Dynamics to conduct Basic Heritage Assessment for the Eskom 132 kV power line between Fibre and Groblershoop. This is located in the Northern Cape Province.

A basic assessment entails the establishment of a broad framework of the potential heritage of an area. Two alternatives for the route were investigated. The line will run between the existing Fibre Substation to the east of Marydale and the proposed new Groblershoop Substation (Figure 1-3). The investigation of the site for the latter did not form part of this study.

The client indicated the area where the proposed development is to take place. The survey was confined to this area.

Figure 1 Location of the towns of Groblershoop and Marydale. North reference is to the top.

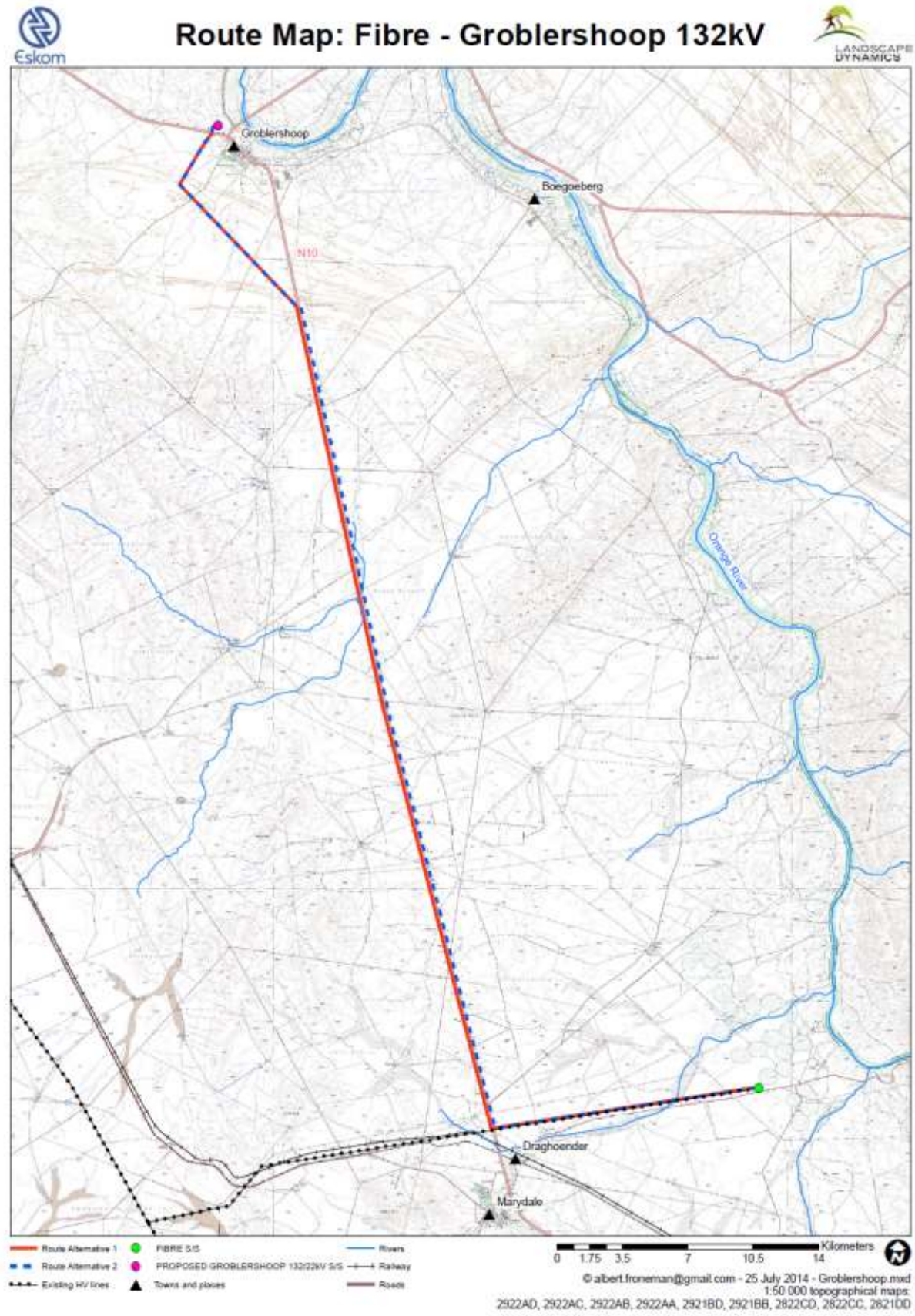

Figure 2 Map indicating the two route alternatives - alternative 1 (preferred) is shown in red and alternative 2 in blue.

Figure 3 Google image indicating the two alternatives.

2. TERMS OF REFERENCE

The Terms of Reference for the survey were to:

1. Identify objects, sites, occurrences and structures of an archaeological or historical nature (cultural heritage sites) located on the property (see Appendix A). However, since this was a basic assessment, a detailed survey was not done and therefore these sites only are an indication of what is to be expected

2. Assess the significance of the cultural resources in terms of their archaeological, historical, scientific, social, religious, aesthetic and tourism value (see Appendix B).

3. Describe the possible impact of the proposed development on these cultural remains, according to a standard set of conventions.

4. Propose suitable mitigation measures to minimize possible negative impacts on the cultural resources.

5. Recommend suitable mitigation measures should there be any sites of significance that might be impacted upon by the proposed development.

6. Review applicable legislative requirements.

3. CONDITIONS & ASSUMPTIONS

The following conditions and assumptions have a direct bearing on the survey and the resulting report:

1. Cultural Resources are all non-physical and physical man-made occurrences, as well as natural occurrences associated with human activity (Appendix A). These include all sites, structure and artifacts of importance, either individually or in groups, in the history, architecture and archaeology of human (cultural) development. Graves and cemeteries are included in this.

2. The significance of the sites, structures and artifacts is determined by means of their historical, social, aesthetic, technological and scientific value in relation to their uniqueness, condition of preservation and research potential. The various aspects are not mutually exclusive, and the evaluation of any site is done with reference to any number of these aspects.

3. Cultural significance is site-specific and relates to the content and context of the site. Sites regarded as having low cultural significance have already been recorded in full and require no further mitigation. Sites with medium cultural significance may or may not require mitigation depending on other factors

such as the significance of impact on the site. Sites with a high cultural significance require further mitigation (see Appendix B).

4. The latitude and longitude of any archaeological or historical site or feature, is to be treated as sensitive information by the developer and should not be disclosed to members of the public.

5. All recommendations are made with full cognizance of the relevant legislation.

6. It has to be mentioned that it is almost impossible to locate all the cultural resources in a given area, as it will be very time consuming. Developers should however note that the report should make it clear how to handle any other finds that might occur.

4. LEGISLATIVE REQUIREMENTS

Aspects concerning the conservation of cultural resources are dealt with mainly in two acts. These are the National Heritage Resources Act (Act 25 of 1999) and the National Environmental Management Act (Act 107 of 1998).

4.1 The National Heritage Resources Act

According to the above-mentioned act the following is protected as cultural heritage resources:

a. Archaeological artifacts, structures and sites older than 100 years
b. Ethnographic art objects (e.g. prehistoric rock art) and ethnography
c. Objects of decorative and visual arts
d. Military objects, structures and sites older than 75 years
e. Historical objects, structures and sites older than 60 years
f. Proclaimed heritage sites
g. Grave yards and graves older than 60 years
h. Meteorites and fossils
i. Objects, structures and sites or scientific or technological value.

The national estate (see Appendix D) includes the following:

a. Places, buildings, structures and equipment of cultural significance
b. Places to which oral traditions are attached or which are associated with living heritage
c. Historical settlements and townscapes
d. Landscapes and features of cultural significance
e. Geological sites of scientific or cultural importance
f. Archaeological and paleontological importance
g. Graves and burial grounds
h. Sites of significance relating to the history of slavery
i. Movable objects (e.g. archaeological, paleontological, meteorites, geological specimens, military, ethnographic, books etc.)

A Heritage Impact Assessment (HIA) is the process to be followed in order to determine whether any heritage resources are located within the area to be developed as well as the possible impact of the proposed development thereon. An Archaeological Impact Assessment only looks at archaeological resources. The different phases during the HIA process are described in Appendix E. An HIA must be done under the following circumstances:

a. The construction of a linear development (road, wall, power line canal etc.) exceeding 300m in length
b. The construction of a bridge or similar structure exceeding 50m in length
c. Any development or other activity that will change the character of a site and exceed 5 000m^2 or involve three or more existing erven or subdivisions thereof
d. Re-zoning of a site exceeding 10 000 m^2
e. Any other category provided for in the regulations of SAHRA or a provincial heritage authority

Structures

Section 34 (1) of the mentioned act states that no person may demolish any structure or part thereof which is older than 60 years without a permit issued by the relevant provincial heritage resources authority.

A structure means any building, works, device or other facility made by people and which is fixed to land, and includes any fixtures, fittings and equipment associated therewith.

Alter means any action affecting the structure, appearance or physical properties of a place or object, whether by way of structural or other works, by painting, plastering or the decoration or any other means.

Archaeology, palaeontology and meteorites

Section 35(4) of this act deals with archaeology, palaeontology and meteorites. The act states that no person may, without a permit issued by the responsible heritage resources authority (national or provincial):

a. destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or paleontological site or any meteorite;
b. destroy, damage, excavate, remove from its original position, collect or own any archaeological or paleontological 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 paleontological material or object, or any meteorite; or
d. Bring onto or use at an archaeological or paleontological site any excavation equipment or any equipment that assists in the detection or

recovery of metals or archaeological and paleontological material or objects, or use such equipment for the recovery of meteorites.

e. Alter or demolish any structure or part of a structure which is older than 60 years as protected.

The above mentioned may only be disturbed or moved by an archaeologist, after receiving a permit from the South African Heritage Resources Agency (SAHRA). In order to demolish such a site or structure, a destruction permit from SAHRA will also be needed.

Human remains

Graves and burial grounds are divided into the following:

a. ancestral graves
b. royal graves and graves of traditional leaders
c. graves of victims of conflict
d. graves designated by the Minister
e. historical graves and cemeteries
f. human remains

In terms of Section 36(3) of the National Heritage Resources Act, no person may, without a permit issued by the relevant heritage resources authority:

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

Unidentified/unknown graves are also handled as older than 60 until proven otherwise.

Human remains that are less than 60 years old are subject to provisions of the Human Tissue Act (Act 65 of 1983) and to local regulations. Exhumation of graves must conform to the standards set out in the **Ordinance on Excavations** (**Ordinance no. 12 of 1980**) (replacing the old Transvaal Ordinance no. 7 of 1925).

Permission must also be gained from the descendants (where known), the National Department of Health, Provincial Department of Health, Premier of the Province and local police. Furthermore, permission must also be gained from the various landowners (i.e. where the graves are located and where they are to be relocated) before exhumation can take place.

Human remains can only be handled by a registered undertaker or an institution declared under the **Human Tissues Act** (**Act 65 of 1983 as amended**).

4.2 The National Environmental Management Act

This act (Act 107 of 1998) states that a survey and evaluation of cultural resources must be done in areas where development projects, that will change the face of the environment, will be undertaken. The impact of the development on these resources should be determined and proposals for the mitigation thereof are made.

Environmental management should also take the cultural and social needs of people into account. Any disturbance of landscapes and sites that constitute the nation's cultural heritage should be avoided as far as possible and where this is not possible the disturbance should be minimized and remedied.

5. THE INTERNATIONAL FINANCE CORPORATIONS' PERFORMANCE STANDARD FOR CULTURAL HERITAGE

This standard recognizes the importance of cultural heritage for current and future generations. It aims to ensure that clients protect cultural heritage in the course of their project activities.

This is done by clients abiding to the law and having heritage surveys done in order to identify and protect cultural heritage resources via field studies and the documentation of such resources. These need to be done by competent professionals (e.g. archaeologists and cultural historians). Possible chance finds, encountered during the project development, also needs to be managed by not disturbing it and by having it assessed by professionals.

Impacts on the cultural heritage should be minimized. This include the possible maintenance of such sites in situ, or when impossible, the restoration of the functionality of the cultural heritage in a different location. When cultural historical and archaeological artifacts and structures need to be removed is should be done by professionals and by abiding to the applicable legislation. The removal of cultural heritage resources may however only be considered if there are no technically or financially feasible alternatives. In considering the removal of cultural resources, it should be outweighed by the benefits of the overall project to the effected communities. Again professionals should carry out the work and adhere to the best available techniques.

It is necessary to engage into consultation with affected communities. This entails that access to such communities should be granted to their cultural heritage if this is applicable. Compensation for the loss of cultural heritage should only be given in extra-ordinary circumstances.

Critical cultural heritage may not be impacted on. Professionals should be used to advise on the assessment and protection thereof. Utilization of cultural heritage resources should always be done in consultation with the effected communities in

order to be consistent with their customs and traditions and to come to agreements with relation to possible equitable sharing of benefits from commercialization.

6. METHODOLOGY

6.1 Survey of literature

A survey of literature was undertaken in order to obtain background information regarding the area. Sources consulted in this regard are indicated in the bibliography.

6.2 Field survey

The survey was conducted according to generally accepted heritage practices and was aimed at locating a broad overview of the heritage of the area. The aim therefore was to find as much objects, sites and features of cultural significance in the area of proposed development. One regularly looks a bit wider than the demarcated area, as the surrounding context needs to be taken into consideration.

If required, the location/position of any site was determined by means of a Global Positioning System (GPS)[1], while photographs were also taken where needed. The survey was undertaken by a physical survey via off-road vehicle and on foot, but since it was a linear development following existing roads, the foot survey was limited to investigation certain areas where the vegetation seemed to indicate that there may be a disturbance which could be as a result of the presence of a heritage resource (Figure 4). The length of the proposed route is approximately 65 km, but of course more as one needs to take the alternative also into consideration. The field survey was done by one person and took 8 hours to complete.

6.3 Oral histories

People from local communities are interviewed in order to obtain information relating to the surveyed area. It needs to be stated that this is not applicable under all circumstances. When applicable, the information is included in the text and referred to in the bibliography.

6.4 Documentation

All sites, objects features and structures identified were documented according to the general minimum standards accepted by the archaeological profession. Co-ordinates of individual localities were determined by means of the Global Positioning System (GPS).The information was added to the description in order to facilitate the identification of each locality.

[1] A Garmin Oregon 550 with an accuracy factor of a few meters.

Figure 4 Track route of the surveyed route.

6.5 Evaluation of Heritage sites

The evaluation of heritage sites is done by using the following criteria:

- The unique nature of a site
- The integrity of the archaeological deposit
- The wider historic, archaeological and geographic context of the site
- The location of the site in relation to other similar sites or features
- The depth of the archaeological deposit (when it can be determined or is known)
- The preservation condition of the site
- Uniqueness of the site and
- Potential to answer present research questions.

7. DESCRIPTION OF THE ENVIRONMENT

The two proposed routes runs through a large number of farms (see Figure 3). Both routes start at the existing Fibre Substation (Figure 5) and then more or less follow a gravel road to the west, both being to the north of the gravel road. The routes then pass the Draghoender Station. At the intersection with the N10 national road, both turns towards the north and follows this road. Alternative 1 lies to the west of the road and alternative to the east. More or less 10 km to the south of Groblershoop both routes turns towards the northwest, running along a farm boundary. After approximately 10 km both then turn to the northeast, crossing the N10 road, ending at the proposed Groblershoop substation.

Both alternatives have more or less similar environmental characteristics (Figure 6-16). This consist of red dunes and low vegetation, with here and there a rocky outcrop.

The land is mostly used for grazing and game farming, but a small portion show disturbance by agricultural activities. A few drainage lines are crossed by the proposed lines. These are mainly non-perennial streams. Signs of erosion, due to disturbance, were also noted here and there.

Figure 5 The Fibre Substation.

Figure 6 The existing power line close to the first section of both alternatives.

Figure 7 General view of the environmental conditions for both alternatives along the gravel road close to Draghoender Station.

Figure 8 One of the drainage lines along both alternative routes. Stone tools are frequently found in such areas.

Figure 9 N10 route along which both alternatives run, alternative 1 to the left and 2 to the right.

Figure 10 General view of vegetation along both route alternatives.

Figure 11 Disturbance in vegetation along route alternative 1.

Figure 12 Signs of erosion, also an indication of disturbance, along route alternative 2.

Figure 13 A dry pan along route alternative 2.

Figure 14 A red dune along route alternative 1.

Figure 15 Reasonably dense vegetation on the northern section of both route alternatives

Figure 16 General view of area where both routes end at the proposed Groblershoop Substation.

8. HISTORICAL CONTEXT

Only one site of cultural heritage significance was located during the survey. However, it needs to be considered that sites may become known later once a detailed survey has been done and that those need to be dealt with in accordance with the legislation discussed above. In order to enable the reader to better understand possible archaeological and cultural features that may be unearthed during construction activities, it is necessary to give a background regarding the different phases of human history.

8.1 Stone Age

The Stone Age is the period in human history when lithic material was mainly used to produce tools (Coertze & Coertze 1996: 293). In South Africa the Stone Age can be divided in three periods. It is, however, important to note that dates are relative and only provide a broad framework for interpretation. The division for the Stone Age according to Korsman & Meyer (1999: 93-94) is as follows:

Early Stone Age (ESA) 2 million – 150 000 years ago
Middle Stone Age (MSA) 150 000 – 30 000 years ago
Late Stone Age (LSA) 40 000 years ago – 1850 - A.D.

This geographical area is not well-known as one containing many prehistoric sites. One however has to realize that this most likely only indicates that not much research has been done here before. On the existing SAHRA Database no such

sites are indicated here. The nearest indicated are the Doornlaagte Early Stone Age archaeological site close to Kimberley, the well-known Wonderwerk Cave in the Kuruman Hills to the east, Tsantsabane, an ancient specularite working on the eastern side of Postmasburg, Doornfontein, another specularite working north of Beeshoek and a cluster of important Stone Age sites near Kathu. Additional specularite workings with associated Ceramic Later Stone Age material and older Fauresmith sites (early Middle Stone Age) are known from Lylyfeld, Demaneng, Mashwening, King, Rust & Vrede, Paling, Gloucester and Mount Huxley (Morris 2005: 3).

The onset of the Middle Stone Age coincided with a widespread demand for coloured or glittering minerals that arose at the time for still unknown reasons. The intensive collection of such substances soon exhausted surface exposures and led to the quest being extended underground and thus to the birth of mining practice. Specularite was commonly mined in the Postmasburg area. In 1968 AK Boshier, working in collaboration with P Beaumont, found a number of underground specularite mines on Paling (De Jong 2010: 35). Stone and Iron Age communities mined specularite associated with iron ores for cosmetic purposes at Blinkklipkop, Paling, Gloucester and other farms (De Jong 2010: 41; Snyman 2000: 3).

A number of Stone Age sites and scattered finds of Stone Age material were identified by Küsel et.al. (2009) and Archaetnos close to the town of Hotazel and adjacent to the Gamagara River during 2011 (Archaetnos database). Many Middle and Late Stone Age tools have been found by Archaetnos during surveys in the Northern Cape. These sites are located close to Griekwastad, Hotazel. Postmasburg and Kenhardt , Pofadder and Marydale (Archaetnos database). Many Middle and Late Stone Age tools as well as rock engravings were also found on the farm Van Rooys Vley in the Upington district (Van Vollenhoven 2012b) as well as close to Putsonderwater (Van Vollenhoven 2014). Rock engraving (rock pecking) sites are known from Beeshoek and Bruce (Morris 2005: 3; Snyman 2000: 3).

The mentioned Late Stone Age sites are associated with the San people. Mitchell (2002: 126) indicates that the language group who occupied the Northern Cape is the /Auni-//Khomani and Eastern /Hoa. These people were hunters and gatherers which means that they would have moved around, leaving little trace of their existence.

The environment here seems very similar to that at the study area, indicating that Stone Age material is likely to also be found along the proposed routes. This was indeed the case (Figure 17). These find were however isolated and has little heritage value.

From the above mentioned it is clear that Stone Age people did utilize the area by settling and probably hunting and gathering in it. The environment definitely would be supportive to Stone Age activities. The small hills most likely would have given natural shelter and material to make stone tools from. These volcanic intrusions definitely give material suitable for the manufacture of lithic tools. Although the large flat surrounding area would not have given shelter, it must have been a prime

hunting area. One should therefore be on the lookout for stone tools during construction work on the site.

Figure 17 MSA tool, example of an isolated stone tool, found during the survey.

8.2 Iron Age

The Iron Age is the name given to the period of human history when metal was mainly used to produce metal artifacts (Coertze & Coertze 1996: 346). In South Africa it can be divided in two separate phases according to Van der Ryst & Meyer (1999: 96-98), namely:

Early Iron Age (EIA) 200 – 1000 A.D.
Late Iron Age (LIA) 1000 – 1850 A.D.

Huffman (2007: xiii) however, indicates that a Middle Iron Age should be included. His dates, which now seem to be widely accepted in archaeological circles, are:

Early Iron Age (EIA) 250 – 900 A.D.
Middle Iron Age (MIA) 900 – 1300 A.D.
Late Iron Age (LIA) 1300 – 1840 A.D.

No Early or Middle Iron Age sites have been identified in the area of study. Iron Age people occupied the central and eastern parts of southern Africa from about 200 A.D., but the San and Khoi remained in the western and southern parts (Inskeep 1978: 126; see also Huffman 2007).

During the Late Iron Age (LIA), people stayed in extensive stonewalled settlements, such as the Thlaping capital Dithakong, 40 km north of Kuruman. Sotho-Tswana and Nguni societies, the descendants of the LIA mixed farming communities, found the region already sparsely inhabited by the Late Stone Age (LSA) Khoisan groups, the so-called 'first people'. Most of them were eventually assimilated by LIA communities and only a few managed to survive, such as the Korana and Griqua. This period of contact is sometimes known as the Ceramic Late Stone Age and is represented by the Blinkklipkop specularite mine near Postmasburg and finds at the Kathu Pan (De Jong 2010: 36). It is also known that Late Iron Age people did utilize the area close to the Orange River, albeit briefly, as they did mine copper in the Northern Cape (Inskeep 1978: 135).

Iron Age people therefore probably did not settle in the study area. It therefore is no surprise that no such sites were identified during the survey.

8.3 Historical Age

The historical age started with the first recorded oral histories in the area. It includes the moving into the area of people that were able to read and write. This era is sometimes called the Colonial era or the recent past.

Due to factors such as population growth and a decrease in mortality rates, more people inhabited the country during the recent historical past. Therefore and because less time has passed, much more cultural heritage resources from this era have been left on the landscape.

It is important to note that all cultural resources older than 60 years are potentially regarded as part of the heritage and that detailed studies are needed in order to determine whether these indeed have cultural significance. Factors to be considered include aesthetic, scientific, cultural and religious value of such resources.

Such sites include the many historical buildings and structures indicated on the SAHRA database in Kakamas, Kenhardt, Keimoes and Upington (SAHRA Database). These are associated with the early missionaries, travelers, first white farmers and establishment of towns during the 19th century.

Factors such as population expansion, increasing pressure on natural resources, the emergence of power blocs, attempts to control trade and penetration by Griquas, Korana and white communities from the south-west resulted in a period of instability in Southern Africa that began in the late 18th century and effectively ended with the settlement of white farmers in the interior. This period, known as the *difaqane* or *Mfecane*, also affected the Northern Cape Province, although at a relatively late stage compared to the rest of Southern Africa. Here, the period of instability, beginning in the mid-1820s, was triggered by the incursion of displaced refugees associated with the Tlokwa, Fokeng, Hlakwana and Phuting tribal groups (De Jong 2010: 36).

The *difaqane* coincided with the penetration of the interior of South Africa by white traders, hunters, explorers and missionaries. The first traders in the Northern Cape

were PJ Truter's and William Somerville's journey of 1801, which reached Dithakong at Kuruman. They were again followed by Cowan, Donovan, Burchell and Campbell and resulted in the establishment of a London Mission Society station near Kuruman in 1817 by James Read (De Jong 2010: 36). During the 1870's William Sanderson, John Ryan and John Ludwig passed through the area close to Postmasburg (Snyman 2000: 3).

The Great Trek of the Boers from the Cape in 1836 brought large numbers of Voortrekkers up to the borders of large regions known as Bechuanaland and Griqualand West, thereby coming into conflict with many Tswana groups and also the missionaries of the London Mission Society. The conflict between Boer and Tswana communities escalated in the 1860s and 1870s when the Korana and Griqua communities became involved and later also the British government.

The conflict mainly centered on land claims by various communities. For decades the western border of the Transvaal Boer republic was not fixed. Only through arbitration (the Keate Arbitration), triggered by the discovery of gold at Tati (1866) and diamonds at Hopetown (1867) was part of the western border finally determined in 1871. Ten years later, the Pretoria Convention fixed the entire western border, thereby finally excluding Bechuanaland and Griqualand West from Boer domination (De Jong 2010: 36).

The Gariep area was inhabited by the Nama, Bondelswarts, Afrikaners, Koranna and the Griqua. These people utilized the islands in the Orange (Gariep) River and due to their wars the Koranna chief, Klaas Lukas, appealed for the establishment of a mission station at Olyfenhoutsdrift. This led to the Reverend Christiaan Schröder establishing a mission station here in 1871. The buildings at the missionary were erected between 1873 and 1883. These buildings are today hosting the museum in the town of Upington (Kalahari-Oranje Museum brochure).

Conflict between the white farmers and the San and Koranna between 1869 and 1879 led to a visit by Sir Thomas Upington to investigate the situation. This resulted in a police force being stationed here. The Reverend Schröder refused them using the name Olyvenhoutsdrift and therefore the name Upington was used to refer to the police. In 1898 the two areas united under the name Upington (Kalahari-Oranje Museum brochure).

From the 1880's onwards colonial settlement was promoted in the area. Government-owned land was surveyed and divided into farms, which were transferred to farmers. Surveyors were given the task of surveying and naming some of the many farms in this region. These farms were allocated to prospective farmers, but permanent settlement only started in the late 1920s and the first farmsteads were possibly built during this period. The region remained sparsely populated until the advent of the 20th century (De Jong 2010: 36).

Another source about the region (Van Zyl 2010: 13) also indicates that most of the farms were still Government farms and were leased to farmers in 1875. It seems as if shortly hereafter farms were sold to individuals. For instance JJ Pepler bought the farm Keukendraai (along which the route goes) in 1880. Izak Malherbe seems to

have been the first owner of the farm Uitdraai. He sold it to Izak Meeuwesen in 1903. This farm eventually became the town of Groblershoop where the first house was only built in 1912 (Van Zyl 2010: 37).

The town was first called Sternham, but in 1935 the name was changed to Groblershoop. It was named after the Minister of Lands, Mr. PGW Grobler, who played an important role in the building of the Boegoeberg Dam and the irrigation system linked thereto (Van Zyl 2010: 38). The dam and irrigation system was built in 1929 (Van Zyl 2010: 14).

The town of Putsonderwater is located on the farm Klippan. The town was first called Krombegin. During the 1880's David Ockhuis dug a well here. As water was a very scarce commodity during those days, he decided to tell everyone that the well is dry and from this originated the name Putsonderwater (Well-without-water). It later became an important station for the farmers to reach the markets (Erasmus 1995:340-341). Today it is a ghost town.

The above mentioned information means that the buildings on these farms could only have been built after the mid-19th century and most likely after more or less 1875. This gives assistance in the dating thereof. Such buildings were not seen along any of the route alternatives. Graves always is a possibility, and such a site was indeed identified during the survey.

9. DISCUSSION OF SITES IDENTIFIED DURING THE SURVEY

Only one site of note was identified, being a grave yard close to both alternatives. It however is too far from any of these to be impacted on. The site should however be notes, so that the developer can ensure that future planning does not lead to any impact on the site.

This is a large graveyard close to the Draghoender Station. The site contains at least 10 graves, all older than 60 years (Figure 18). In fact the graves date to the Anglo-Boer War, 1899-1902. The graves most likely are from the Dragoon (mounted infantry unit) who was stationed here during the War. It is said that the name of the station 'Draghoender' originated from the word 'Dragoon'.

GPS: 29°22'03.0"S
22°08'02.3"E

Due to the sensitivity of this issue, graves are always regarded as having a high cultural significance. These graves are of a local significance and are therefore given a field rating of Local Grade IIIA. It should be included in the heritage register and not be mitigated.

Figure 18 Some of the graves identified. These types of grave markers are typical of British War Graves.

There are two options when dealing with graves. The first would be to fence it in and write a management plan for the preservation thereof. This option will come into play if there is no direct impact on the graves. It should be kept in mind that there always is a secondary impact on graves since families may not have access thereto once a development is done.

The second option is to have the graves exhumed and the bodies reburied. This option is preferred when graves cannot be avoided by the development. Before exhumation can be done a process of social consultation is needed in order to find the associated families and obtain permission from them. For graves younger than 60 years only an undertaker is involved in the process, but for those older than 60 years or with an unknown date of death, an undertaker and archaeologist should be involved. Unknown graves are handled similarly to heritage graves.

However, it is believed that these graves are far enough from the proposed route not to pose a problem. It may therefore just be left as it is. In fact, due to its significance, option 2 should never be considered.

10. CONCLUSIONS AND RECOMMENDATIONS

In conclusion it can be stated that the assessment of the area was conducted successfully. The one site identified (graves) although of high heritage importance) will not be impacted on (Figure 19).

Figure 19 Location of the site identified during the survey.

The final recommendations are as follows:

- From a heritage perspective there is no specific preference for any of the two route alternatives . Any of these may be used.
- Once a specific route has been chosen and pylon positions determined, a detailed Heritage Impact Assessment will still be needed.
- It is not expected that much would be found, but grave sites cannot be predicted and may be hidden among long grass.
- Should such site be identified, the route needs to steer at least 20 m clear thereof.
- The proposed development may continue as long as the above mentioned recommendations are adhered to.
- It should be noted that the subterranean presence of archaeological and/or historical sites, features or artifacts are always a distinct possibility. Care should therefore be taken when development work commences that if any of these are accidentally discovered, a qualified archaeologist be called in to investigate.

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APPENDIX A

DEFINITION OF TERMS:

Site: A large place with extensive structures and related cultural objects. It can also be a large assemblage of cultural artifacts, found on a single location.

Structure: A permanent building found in isolation or which forms a site in conjunction with other structures.

Feature: A coincidental find of movable cultural objects.

Object: Artifact (cultural object).

(Also see Knudson 1978: 20).

APPENDIX B

DEFINITION/ STATEMENT OF HERITAGE SIGNIFICANCE:

Historic value:	Important in the community or pattern of history or has an association with the life or work of a person, group or organization of importance in history.
Aestetic value:	Important in exhibiting particular aesthetic characteristics valued by a community or cultural group.
Scientific value:	Potential to yield information that will contribute to an understanding of natural or cultural history or is important in demonstrating a high degree of creative or technical achievement of a particular period
Social value:	Have a strong or special association with a particular community or cultural group for social, cultural or spiritual reasons.
Rarity:	Does it possess uncommon, rare or endangered aspects of natural or cultural heritage.
Representivity:	Important in demonstrating the principal characteristics of a particular class of natural or cultural places or object or a range of landscapes or environments characteristic of its class or of human activities (including way of life, philosophy, custom, process, land-use, function, design or technique) in the environment of the nation, province region or locality.

APPENDIX C

SIGNIFICANCE AND FIELD RATING:

Cultural significance:

- Low — A cultural object being found out of context, not being part of a site or without any related feature/structure in its surroundings.

- Medium — Any site, structure or feature being regarded less important due to a number of factors, such as date and frequency. Also any important object found out of context.

- High — Any site, structure or feature regarded as important because of its age or uniqueness. Graves are always categorized as of a high importance. Also any important object found within a specific context.

Heritage significance:

- Grade I — Heritage resources with exceptional qualities to the extent that they are of national significance

- Grade II — Heritage resources with qualities giving it provincial or regional importance although it may form part of the national estate

- Grade III — Other heritage resources of local importance and therefore worthy of conservation

Field ratings:

i. National Grade I significance — should be managed as part of the national estate
ii. Provincial Grade II significance — should be managed as part of the provincial estate
iii. Local Grade IIIA — should be included in the heritage register and not be mitigated (high significance)
iv. Local Grade IIIB — should be included in the heritage register and may be mitigated (high/ medium significance)
v. General protection A (IV A) — site should be mitigated before destruction (high/ medium significance)
vi. General protection B (IV B) — site should be recorded before destruction (medium significance)
vii. General protection C (IV C) — phase 1 is seen as sufficient recording and it may be demolished (low significance)

APPENDIX D

PROTECTION OF HERITAGE RESOURCES:

Formal protection:

National heritage sites and Provincial heritage sites – grade I and II
Protected areas - an area surrounding a heritage site
Provisional protection – for a maximum period of two years
Heritage registers – listing grades II and III
Heritage areas – areas with more than one heritage site included
Heritage objects – e.g. archaeological, palaeontological, meteorites, geological specimens, visual art, military, numismatic, books, etc.

General protection:

Objects protected by the laws of foreign states
Structures – older than 60 years
Archaeology, palaeontology and meteorites
Burial grounds and graves
Public monuments and memorials

APPENDIX E

HERITAGE IMPACT ASSESSMENT PHASES

1. Pre-assessment or scoping phase – establishment of the scope of the project and terms of reference.
2. Baseline assessment – establishment of a broad framework of the potential heritage of an area.
3. Phase I impact assessment – identifying sites, assess their significance, make comments on the impact of the development and makes recommendations for mitigation or conservation.
4. Letter of recommendation for exemption – if there is no likelihood that any sites will be impacted.
5. Phase II mitigation or rescue – planning for the protection of significant sites or sampling through excavation or collection (after receiving a permit) of sites that may be lost.
6. Phase III management plan – for rare cases where sites are so important that development cannot be allowed.