

Phase One Heritage Impact Assessment of the proposed upgrading and re-laying of Ekuvukeni 450 MM Pipeline and Bulk Water Treatment Works.

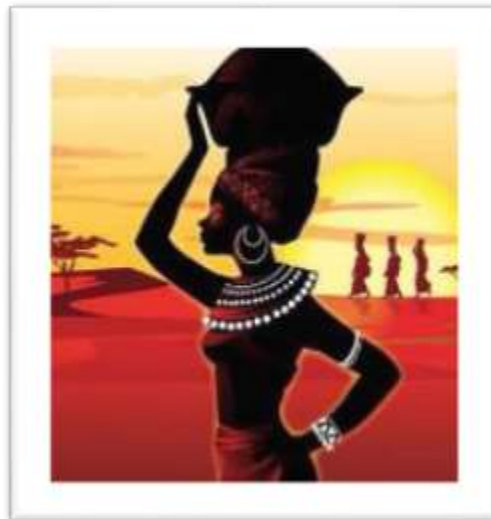
Province: KwaZulu-Natal

District Municipality: uThukela District Municipality

Local Municipality: Alfred Duma Local Municipality

Implementing Agent: uThukela District Municipality

For Acer Africa Environmental Consultants



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Declaration of Consultants Independence

Sian Hall and Frans Prins are independent consultants to Acer Africa Environmental Consultants, and have no business, financial, personal or other interest in the activity, application or appeal in respect of which they were appointed other than fair remuneration for work performed in connection with the activity, application or appeal. There are no circumstances whatsoever that compromise the objectivity of this specialist performing such work.

List of Tables

Table 1. Background Information

List of Figures

Figure 1. Regional location of the greater project area, and of the area known as “Ekuvukeni”. Source: ECA Engineers, Report: “Water Supply to Ekuvukeni”, November 2016.

Figure 2. Google photograph of the area showing the type of terrain and general environmental landscape within which the study area is set. Source: Google Maps.

Figure 3. Map of the existing water infrastructure of the pipeline. Source: Notes on Meeting. Ekuvukeni – Environmental. 19th September 2019.

Figure 4. Planned Bulk Water supply to various areas in the region, including Ekuvukeni. Source: Notes on Meeting. Ekuvukeni – Environmental. 19th September 2019.

Figure 5. Map presenting the Ekuvukeni area in relation to the major town and settlements in the surrounding region. Source: Notes on Meeting. Ekuvukeni – Environmental. 19th September 2019.

Figure 6. Showing the closest known and recorded archaeological to the pipeline. Source: KZN Archaeological database.

Figure 7. Showing the investigation footprint in relation to the battle site of Elandslaagte. The city of Ladysmith lies to the south-west, and is the scene of Siege of Ladysmith during the Anglo-Boer War. Source: Notes on Meeting. Ekuvukeni – Environmental. 19th September 2019.

List of Abbreviations and Acronyms

| | |
|----------|---|
| KZN | KwaZulu Natal |
| KZN PHRA | KwaZulu-Natal Provincial Heritage Resources Act |
| NHRA | National Heritage Resources Act |
| PHA | Provincial Heritage Authority |
| SAHRIS | South African Heritage Resources Agency |

Details of independent Heritage Impact Assessment Consultant

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Executive Summary

A phase one heritage survey of the proposed upgrading of the Ekuvukeni Pipeline, Alfred Duma Local Municipality and uThukela District Municipality, KwaZulu-Natal identified 23 heritage sites in the greater project area. Heritage sites and features identified on this landscape includes archaeological sites, old homesteads, modern homesteads, potential graves, modern structures, Iron Age stone circles or enclosures, possible Boer War sites and a modern cemetery. However, only two of these sites, both Later Iron Age stone walled enclosures, are situated across the proposed pipeline trajectory. Mitigation will be required for these Iron Age sites as they will be damaged by the proposed development. Depending on the specific significance and context a buffer of between 5m – 20 m must be enforced around each site. The pipeline trajectory will have to be changed according to the positioning of the particular site. Alternatively a Phase Two Heritage Assessment should be conducted with the view to perform a rescue excavation prior to any development. The remaining sites are all situated within 50m but not closer than 20m from the proposed pipeline trajectory. It is the opinion of the consultants that the proposed development will have a minimal impact on all these sites if the developer respects a buffer of at least 1m around each site. There is no reason from a heritage perspective why the development may not proceed as planned if the developer strictly adheres to these stipulations. It is furthermore advised that the heritage consultant conduct a walk through of the footprint once the pipeline trajectory has been marked on the ground. This stipulation is especially relevant in those areas where the pipeline has already been constructed. The Phase 1 Desktop Paleontological assessment indicates that the footprint is located in an area with a high fossil sensitivity rating. An Amafa accredited palaeontologist will need to conduct a ground survey of the pipeline trajectory. A protocol of finds will also have to be followed. However, a protocol of finds must be followed. Attention is drawn to the South African National Heritage Resources Act, 1999 (Act No. 25 of 1999) (NHRA) and the KwaZulu-Natal Heritage Act (Act No. 4 of 2008) which requires that operations that expose paleontological, archaeological and historical remains should cease immediately, pending evaluation by the provincial heritage agency

1. Background Information on the Project

Table 1 Background Information

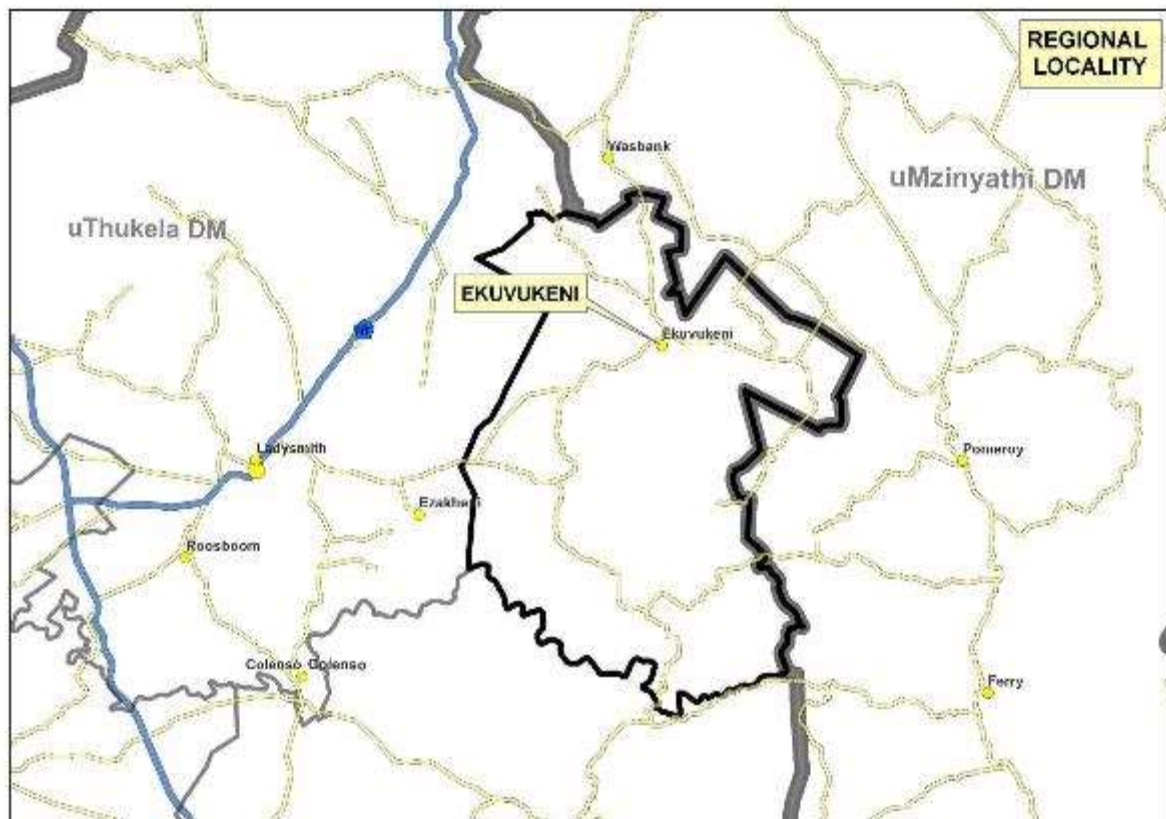
| | |
|---------------------------|--|
| Consultant: | Sian Hall (Cultural Solutions) and Frans Prins (Active Heritage cc) for Acer Africa Environmental Consultants |
| Type of development: | Upgrade and relaying of existing pipeline. |
| Rezoning or subdivision: | N/A |
| Legislative requirements: | The Heritage Impact Assessment was carried out in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA) and following the requirements of the National Heritage Resources Act, 1999 (Act No. 25 of 1999) (NHRA) and the KwaZulu-Natal Heritage Act, 1997 (Act No. 4 of 2008) |

Acer Africa Environmental Consultancy has contracted Cultural Solutions Heritage Consultancy to conduct a phase 1 HIA of the trajectory of the proposed upgrade and relaying of the Ekuvukeni Pipeline east of Ladysmith, Alfred Duma Local Municipality, in uThukela District Municipality, KwaZulu-Natal. The GPS co-ordinates for the pipeline are as follows:

Start: S 28° 28' 03.89", E 30° 03' 32.14"

End: S 28° 27' 33.62", E 30° 08' 46.84"

Figure 1 Regional location of the greater project area, and of the area known as “Ekuvukeni”. Source: ECA Engineers, Report: “Water Supply to Ekuvukeni”, November 2016.



1.1 Background Leading to the Study

In the 18th of September 2019 officials from the Department of Environmental Affairs requested environmental approval for the construction of a 450 mm diameter PVC-O bulk pipeline at Ekuvukeni. At a meeting held on the 19th of September 2019, involving relevant stakeholders. During the course of the meeting it was made apparent that approval should be obtained before work on site could commence. Triggers for environmental approval include the size of the pipeline as being larger than 100 mm, and the fact that there are also stream crossings across the path that the pipeline would run¹.

Also, during the course of this meeting, it was identified that that the original scope of the work would be to remove and replace the old 450 mm diameter asbestos pipeline, and to replace it with the new pipeline which will be laid next to the old pipeline in order to make the project more time efficient. It was further decided that this project would become a Ministerial Project.

¹ Notes on Meeting. Ekuvukeni – Environmental. 19th September 2019.

1.2 Background of the Social and Environmental Setting Leading to the Construction of a New Pipeline

Located within the Alfred Duma local Municipality, Ekuvukeni is a rural area with scattered homesteads to some extent adhering to the traditional Nguni spatial homestead pattern. Some of these homesteads do lie very close to the Ekuvukeni pipeline trajectory. The surrounding environment is made-up of thornveld and grassland, within hilly countryside and rocky outcrops. There is evidence for subsistence farming being practiced in the area. It is located within the Alfred Duma Local Municipality.

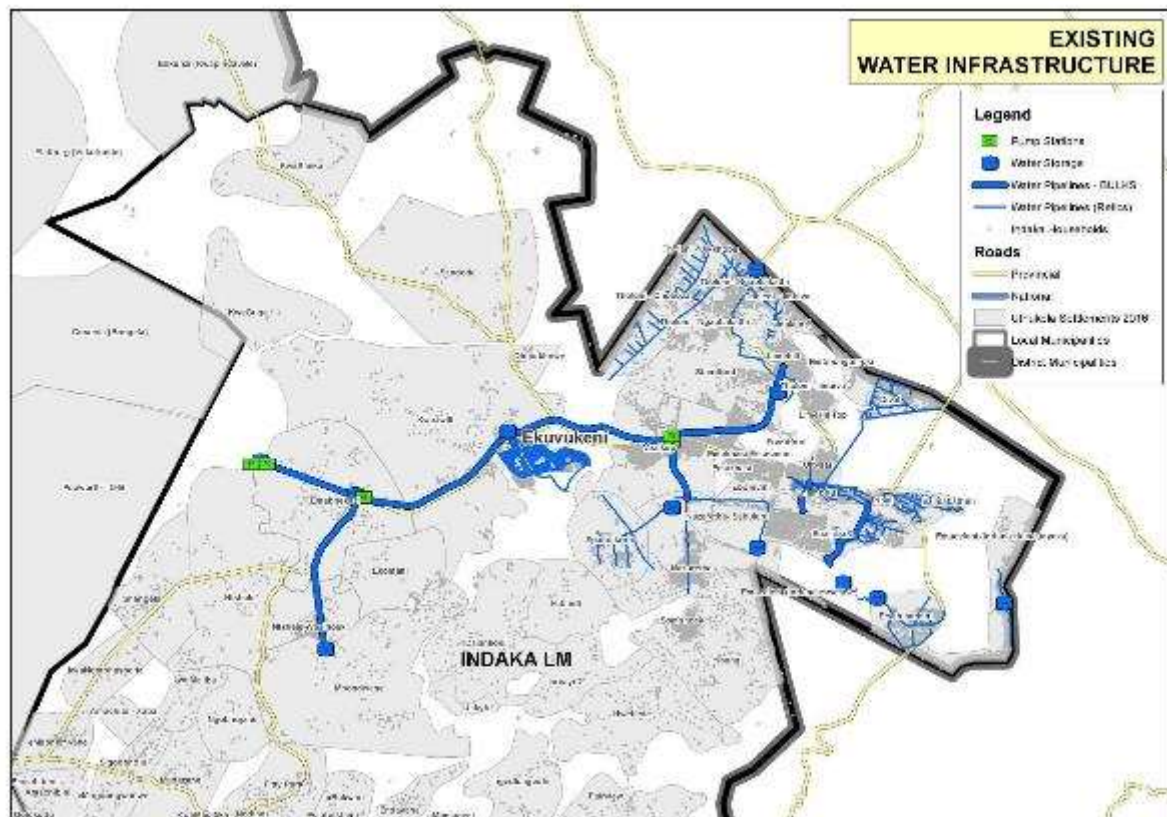
It is noted that the water supply within the Ekuvukeni area is under “severe pressure”, with the Oliphantskop Dam, which was constructed on the Sunday’s River, functioning as the major raw water supply to the Ekuvukeni Water Supply Scheme. This scheme supplies almost 15, 000 household with water, while the proposed Ekuvukeni Scheme is envisaged to supply a further 25, 000 households with water, which translates as a further 130, 000 people².

The first phase of the Ekuvukeni Water Supply Scheme was commissioned during 1984, and comprised of a rising main line from Oliphantskop Water Treatment works to Ekuvukeni town centre, and to Waaihoek, or Ntshеле, located to the south of Oliphantskop. Only these communities were served by this scheme. The pipeline used was an old 300mm diameter asbestos pipeline, which is now in much need of being replaced. The scheme was extended in 1997 to include settlements to the east of the town Ekuvukeni which added to pressure upon the water scheme³.

² As above.

³ Source: Notes on Meeting. Ekuvukeni – Environmental. 19th September 2019.

Figure 1 Map of the existing water infrastructure of the pipeline. Source: Notes on Meeting. Ekuvukeni – Environmental. 19th September 2019.



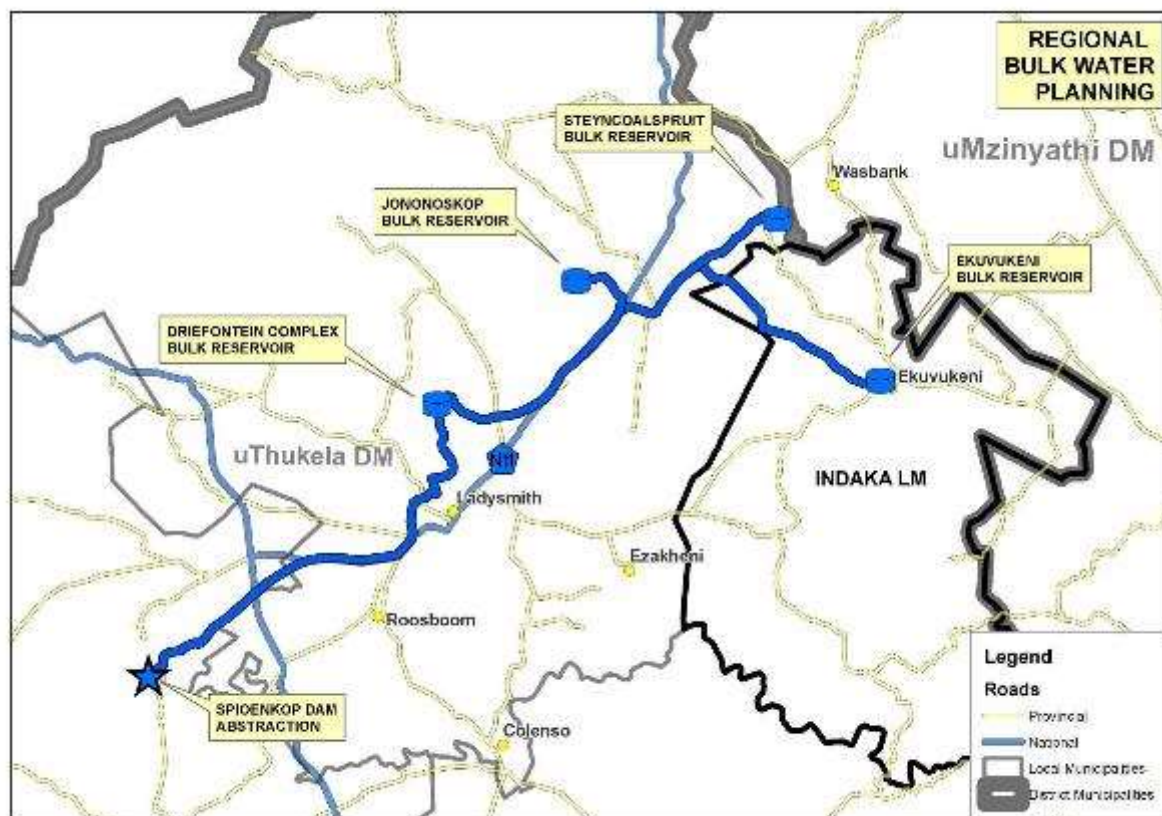
Raw water stored in the Olifantskop Dam is treated at works at the dam at a capacity of 10 ML/day. This is pumped to the command centre at Ekuvukeni, and it is then reticulated throughout the Ekuvukeni area, and also to the surrounding settlements as far as Emaceleni⁴

Over the years, the progressive accumulation of silt in the Olifantskop Dam has progressively decreased its water-bearing capacity to less than a quarter of its original capacity. This stress upon water resources has been exacerbated by the recent drought experienced in the Uthukela District. Currently the dam's water level is very low, which is problematic since the water treatment works are only able to function when there is adequate flow in the river. Furthermore, 31 water tankers are needed to supply water to the Ekuvukeni Water Supply Scheme. Each tanker costs, on average, R90, 000.00 per month, resulting in a total cost of R2.8 million per month⁵.

⁴ As above.

⁵ As above.

Figure 2 Planned Bulk Water supply to various areas in the region, including Ekuvukeni. Source: Notes on Meeting. Ekuvukeni – Environmental. 19th September 2019.



As is apparent from the above figure, there are a number of planned options to supply water to the general area in the short, medium and long term. Currently, the Ekuvukeni Water Scheme supplies water to some 14, 549 households, or about 75, 655 people. Over the medium term it is expected to supply a further 2, 991 household, or 15, 553 people inhabiting settlements close to Ekuvukeni. In total, this would mean that 17, 540 households, or 91, 208 people⁶.

Over the medium term it is also planned that the scheme will be broadened to also supply communities to the south of Ekuvukeni. This would include 7, 488 households, or 38, 938 people. All-in-all, this would mean that 25, 028 households, or 130, 146 people would be supplied with water from the planned scheme⁷.

In the long-term water will be supplied to Ekuvukeni area from Spioenkop Dam Bulk Water Scheme, via Ladysmith and Driefontein, and planned to be completed by the end of 2019.

⁶ As above.

⁷ As above.

This should bring a total volume of 20 ML/day. In order to achieve this a number of factors need to be put into place, such as:

- A Water Demand Management, through which water loss will be reduced
- The development of boreholes for emergency relief
- The dredging of Olifantskop Dam
- Renovation of the water treatment works
- Replacement of the Asbestos Rising Main Line which leads from the water treatment works to Ekuvukeni and Waaihoek Reservoirs⁸.

This study is largely concerned with the development work associated with the trajectory of the replacement of the Asbestos Rising Main Line. It is envisaged that this implementation will result in the social upliftment of the area, and to an improvement of the socio-economic conditions in the project area. Since the project falls within the uThukela District Municipality, they are the project owners responsible for operations and maintenance of the project as delineated by the Water Services Act upon commissioning⁹

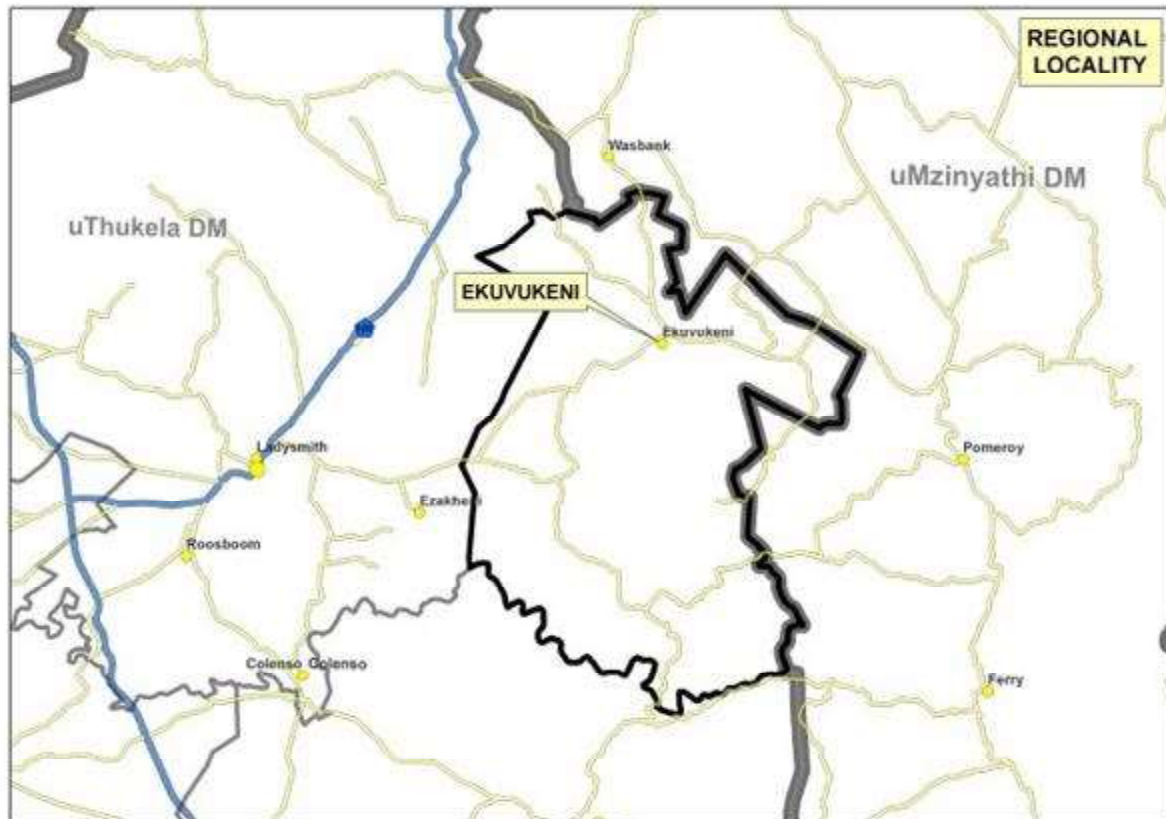
1.2 Details of the Area Surveyed

Ekuvukeni is located in the Alfred Duma Local Municipality, within the Uthukela District Municipality. It lies 32 km to the north-east of Ladysmith, and 10 km to the south-east of the Battle of Elandsplaagte. The co-ordinates of Ekuvukeni town are 28°28'0.00" S, 30°09'00.00" E.

⁸ As above.

⁹ As above.

Figure 5 Map presenting the Ekuvukeni area in relation to the major town and settlements in the surrounding region.
 Source: Notes on Meeting, Ekuvukeni – Environmental, 19th September 2019.



This general area is extremely rich archaeologically and historically. It includes various periods of South Africa's past including Early Stone Age, Middle Stone Age, Iron Age, and Historical. The late Iron Age and settler history is particularly rich in this area with artifacts, habitations sites and built heritage all acting as tangible testament to these periods.

Later Stone Age rock art sites are to be found to the north, east and south of the study area, but all are more than 1 kilometre distant from the project area. A number of Boer War battle sites lie within the close vicinity of the project area, and it is to be expected that traces of movements and events relating to these battles would be found within the study area. Voortrekker farmers also settled in this area, and there may be presence in the project area for their presence.

Living Heritage is to be found along the pipeline trajectory and in the entire are of Ekuvukeni since the homesteads in this area continue to follow a traditional Nguni settlement pattern, with its associated traditional spatial layout of individual homesteads. Graves are often associated with such homesteads and these are always a concern on development projects in such traditional areas.

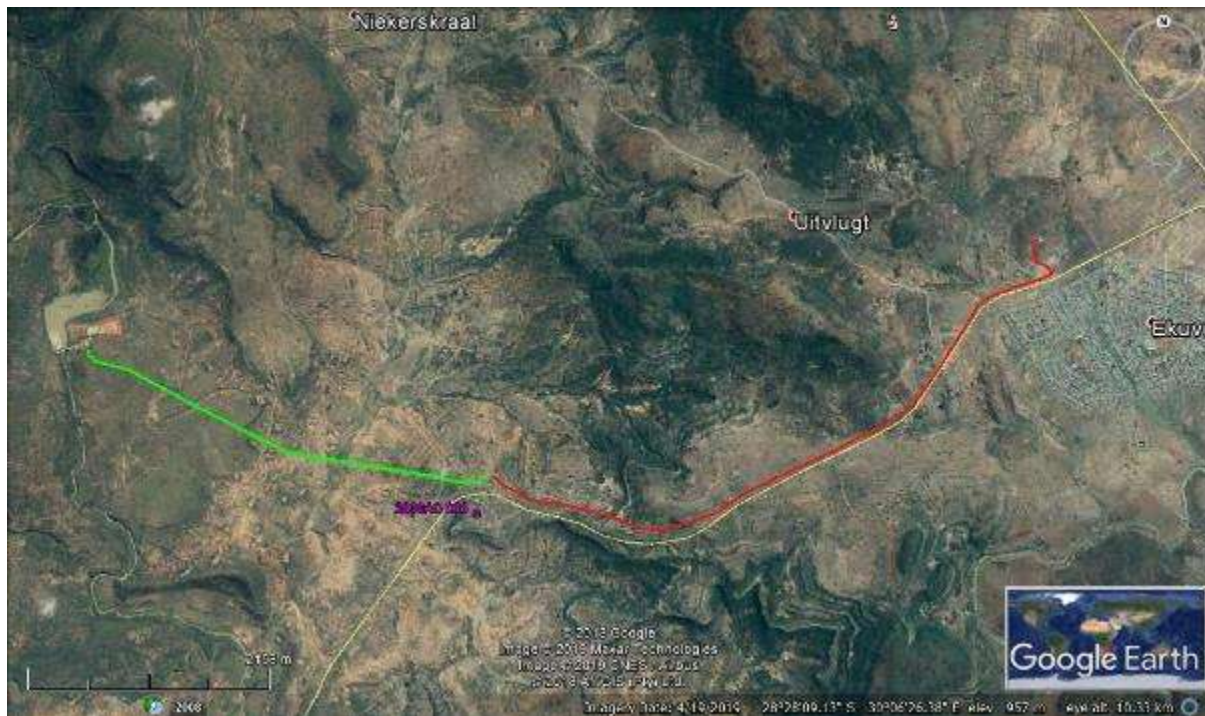
The archaeology and history of the general is more fully outlined in the following section.

2 Background to the Archaeological and Settler History of the Area

Portions of the Alfred Duma Local Municipality have been systematically surveyed for archaeological heritage sites in the past. These were mostly conducted by archaeologists attached to the KwaZulu-Natal Museum, as well as by Amafa staff. Sixty-one sites are recorded in the data base of the KwaZulu-Natal Museum. These include five Early Stone Age sites, five Middle Stone Age sites, six Later Stone Age sites, three rock art sites (two rock paintings and one rock engraving), eleven Later Iron Age sites and twenty historical period Nguni homesteads.

The majority of the Later Iron Age and historical period Nguni homesteads are demarcated by characteristic stone walling. Stone walling and graves related to the Anglo-Boer War period of 1899-1901 are also abundant in the area. Ten sites are recorded in the KwaZulu-Natal Museum data base but many more sites belonging to this period should occur in the greater Ladysmith area. The project area has not been systematically surveyed in the past and no heritage sites are previously recorded from the footprint. However, various Later Iron Age sites occur approximately 10km to the north east of the project area. The closest known archaeological site to this area is a Later Iron Age, as demarcated in purple in Figure 6 below. This site is approximately 270 m from the pipeline, and therefore does not pose an impediment to the laying of the pipeline.

Figure 6. Showing the closest known and recorded archaeological to the pipeline. Source: KZN Archaeological database.



The next closest recorded sites are located at the battle site of Elandslaagte, 10m kilometres of the south-east of the project area, as indicated in Figure 7 below.

Figure 7. Showing the investigation footprint in relation to the battle site of Elandslaagte. The city of Ladysmith lies to the south-west, and is the scene of Siege of Ladysmith during the Anglo-Boer War. Source: Notes on Meeting. Ekuvukeni – Environmental. 19th September 2019.



The San occupied the land for almost 30, 000 years but the local demography started to change soon after 2000 years ago when the first Bantu-speaking farmers crossed the Limpopo River and arrived in South Africa. Around 800 years ago, if not earlier, Bantu-speaking farmers also settled in the greater Ladysmith area. Although some of the sites constructed by these African farmers consisted of stone walling not all of them were made from stone. Sites located elsewhere in the KwaZulu-Natal Midlands show that many settlements just consisted of wattle and daub structures.

These Later Iron Age sites were most probably inhabited by Nguni-speaking groups such as the amaBhele and others (Bryant 1965). However, by 1820 the original African farmers were dispersed from this area due to the expansionistic policies of the Zulu Kingdom of King Shaka. Many individuals of former chiefdoms in the area became bandits and oral tradition suggests that cannibalism may also have been practised by some of these groups. African refugee groups and individuals were given permission to settle in the area by the British colonial authorities after 1845 where most of them became farm labourers. After the Anglo-Zulu war of 1879 and the Bambatha Rebellion of 1911 many of the African people in the study area adopted a Zulu ethnic identity.

European settlement of the area started soon after 1838 when the first Voortrekker settlers marked out large farms in the area. However, most of these farms were abandoned in the 1840's when Natal became a British colony only to be reoccupied again by British immigrants. Nevertheless, a group of Dutch farmers declared an independent republic in 1847 on the banks of the Klip River and called it the Klip River Republic with Andries Spies as commandant.

This pocket republic only survived for a few months before British authority over the area was declared. The British planned a town as an administrative centre for the Klip River District, proclaiming it on 20 June 1850 and called it Ladysmith. Ladysmith became world famous during the Anglo-Boer War of 1899-1901 when it was besieged by Boers from 2nd November 1899 until 28th February 1900. Ghandi, Smuts and Churchill are figures of international significance who were also present during the siege of Ladysmith.

During the 118 day long siege the stone Town Hall sustained considerable damage. It has since been restored to the original vision of the architects. Located next to the Town Hall the building housing the Siege Museum was erected in 1884. It was used as a rations post for civilians. The Museum displays relics from the time of the siege, including documents, uniforms and firearms. Several of the most celebrated battles of the war were fought around Ladysmith. These include the Battles of Elandslaagte, Spionkop, Wagon Hill, Caesar's Camp, Lombard's Kop and Umbulwana Hill. These battle field sites as well as associated graves and buildings of the era are proclaimed heritage sites and are protected by provincial heritage legislation (Derwent 2006).

2.1 A Short History of the Siege of Ladysmith

As war with the Boer republics appeared likely in June 1899, the War Office in Britain dispatched a total of 15,000 troops to Natal, expecting that if war broke out they would be capable of defending the colony until reinforcements could be mobilized and sent to South Africa by steamship. Some of these troops were diverted while returning to Britain from India, others were sent from garrisons in the Mediterranean and elsewhere. Lieutenant General Sir George White was appointed to command this enlarged force. White was 64 years old and suffered from a leg injury incurred in a riding accident. Having served mainly in India he had little experience of South Africa.

Contrary to the advice of several British officials such as Sir Alfred Milner, the High Commissioner for Southern Africa, the Boer governments were not over-awed by the despatch of British troops to Natal. They regarded it as evidence of Britain's determination to seize control of the Boer republics. The Transvaal government under President Paul Kruger considered launching an attack in September, but President Steyn of the Orange Free State, dissuaded them for several weeks while he tried to act as intermediary. With the complete breakdown in negotiations, both republics declared war and attacked on 12 October.

A total of 21,000 Boers advanced into Natal from all sides. White had been advised to deploy his force far back, well clear of the area of northern Natal known as the "Natal

Triangle", a wedge of land lying between the two Boer republics. Instead, White deployed his forces around the garrison town of Ladysmith, with a detachment even further forward at Dundee. The entire British force could concentrate only after fighting two battles at Talana Hill and Elandsplaagte. As the Boers surrounded Ladysmith, White ordered a sortie by his entire force to capture the Boer artillery. The result was the disastrous Battle of Ladysmith, in which the British were driven back into the town having lost 1,200 men killed, wounded or captured.

The Boers then proceeded to surround Ladysmith and cut the railway link to Durban. Major General French and his Chief of Staff, Major Douglas Haig escaped on the last train to leave, which was riddled with bullets. The town was then besieged for 118 days. White knew that large reinforcements were arriving, and could communicate with British units south of the Tugela River by searchlight and heliograph. He expected relief soon. Meanwhile, his troops carried out several raids and sorties to sabotage Boer artillery.

Louis Botha commanded the Boer detachment which first raided Southern Natal, and then dug in north of the Tugela to hold off the relief force. On 15 December, the first relief attempt was defeated at the Battle of Colenso. Temporarily unnerved, the relief force commander, General Redvers Henry Buller, suggested that White either break out or destroy his stores and ammunition and surrender. White could not break out because his horses and draught animals were weak from lack of grazing and forage, but also refused to surrender.

On Christmas Day 1899, the Boers fired into Ladysmith a carrier shell without fuse, which contained a Christmas pudding, two Union Flags and the message "compliments of the season". The shell is still kept in the museum at Ladysmith. A drive around Ladysmith and the surrounding hills will reveal many gravesites and memorials to the fallen soldiers on both sides (Pakenham: 1979).

3 Background Information of the Survey

3.1 Methodology

A desktop study was conducted of the SAHRA inventory of heritage sites as reflected on the SAHRIS website. Various CRM related studies have been conducted in the Alfred Duma Municipality. Most of these were conducted in and around Ladysmith to the south of the project area. No surveys have previously been done in the project area. In addition, the archaeological database of the KwaZulu-Natal Museum was consulted. The ground survey was supplemented by a desktop paleontological survey, discussed a little further on in this report. Although the greater Ladysmith area is rich in paleontological, archaeological and historical sites, only one Later Iron Age Site is listed for the footprint area, as shown on Figure 6.

The study area was visited on the 25 January 2020. A ground survey following standard and accepted archaeological procedures was conducted. The total length of the proposed pipeline was walked by foot. A transect of 50m on either side of the centre of the proposed bridge was surveyed. The consultant also spoke to local residents of the greater project area. None were aware of any graves or other heritage features on the footprint.

3.2 Restrictions Encountered During the Survey

3.2.1 Visibility

Visibility during the site visit was good.

3.2.2 Disturbance

Stone robbing may have occurred on some of the stone walled circles in the greater project area.

3.2.3 Details of Equipment used in the Survey

GPS: Garmin Etrek

Digital cameras: Samsung Galaxy.

All readings were taken using the GPS. Accuracy was to a level of 5 m.

4 Description of Sites and Material Observed

4.1 Locational Data

Province: KwaZulu-Natal

Town: Ekuvukeni

Municipality: Alfred Duma Local Municipality.

: uThukela District Municipality.

The GPS co-ordinates for the pipeline are as follows:

Start: S 28° 28' 03.89", E 30° 03' 32.14"

End: S 28° 27' 33.62", E 30° 08' 46.84"

4.2 Description of the General Area Surveyed

The greater Ladysmith area is rich in archaeological and other heritage sites, with quite a number of sites being recorded within 50 m of the Ekuvukeni pipeline. Historical period sites relating to the Voortrekker era (1830's), Anglo-Zulu War (1879) and the Anglo-Boer War period of 1899-1901 do occur abundantly in the greater Ladysmith area. While possible traces of Boer War activity may be present within the study footprint, there are no sites occurring which are listed on national and provincial data bases. The closest of these is the Battle of Elandsplaagte which lies approximately 19 km to the south-east of the project area, and is presented above in Figure 7. The city of Ladysmith lies to the south-east of the project area, and was the scene of the Battle of Ladysmith.

This general area is extremely rich in Later Iron Age sites, historical traditional homesteads, and contemporary traditional and peri-urban homesteads. Many of these occur within the study footprint – within 50 metres of the pipeline trajectory. A known Later Iron Age site is located some 10 km to the north-east of the study area, while the closest recorded site is located about 270 metres to the south of the pipeline, and is presented in Figure 6 of this document.

The study footprint is located within a multi-layered Landscape however, as particular archaeological and heritage sites falling within the study footprint have been identified, listed and mapped in this report, and they may therefore be protected from damage during the laying of the pipeline.

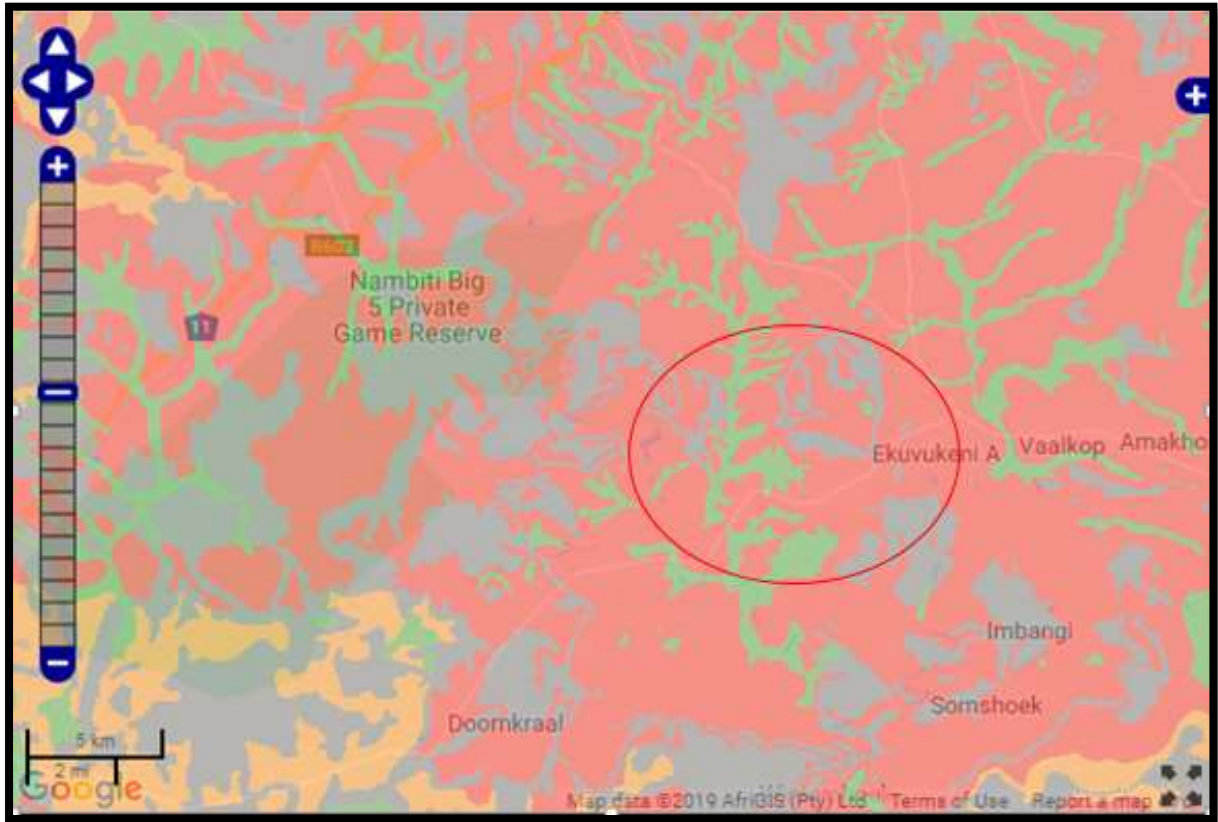
4.3 Palaeontology

The Palaeontological desktop study has found that the footprint is located in an area with a high fossil sensitivity (as indicated by the red background colour in Fig 8). The implication is that an Amafa accredited palaeontologist will be required to conduct a ground survey of the pipeline trajectory. Should any fossils be uncovered during work on the laying of the pipeline then the provincial heritage authority (Amafa) must be notified and all work should be halted subject to an investigation. A protocol of finds must also be followed.

Chapter 8, Section 36 (2) of the KZN PHRA it is written:

“(2) Upon discovery of archaeological or palaeontological material or a meteorite by any person, all activity or operations in the general vicinity of such material or meteorite must cease forthwith and a person who made the discovery must submit a written report to the Council without delay.”

Figure 8 Updated SAHRIS paleo-map displaying that the general area of Ekuvukeni (red polygon) falls within a zone with a high fossil sensitivity. A qualified palaeontologist will need to conduct a ground survey of the footprint and a protocol of finds will have to be followed.



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

4.5 National Legislation and Significance

The National Heritage Resources Act, 1999 (NHRA) (Act No. 25 of 1999), identifies the heritage resources of South Africa as including:

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

The newly promulgated KwaZulu-Natal Heritage Act (Act No. 4 of 2008) also makes specific mention to rock art and archaeological sites.

It is further stated that:

(1) No person may destroy, damage, excavate, alter, write or draw upon, or otherwise disturb any battlefield site, archaeological site, rock art site, palaeontological site, historic fortification, meteorite or meteorite impact site without the prior written approval of the Council having been obtained on written application to the KwaZulu-Natal Heritage Council.

(2) Upon discovery of archaeological or palaeontological material or a meteorite by any person, all activity or operations in the general vicinity of such material or meteorite must cease forthwith and a person who made the discovery must submit a written report to the Council without delay.

(3) The Council may, after consultation with an owner or controlling authority, by way of written notice served on the owner or controlling authority, prohibit any activity considered by the Council to be inappropriate within 50 metres of a rock art site.

(4) No person may exhume, remove from its original position or otherwise disturb, damage, destroy, own or collect any object or material associated with any battlefield site, archaeological site, rock art site, palaeontological site, historic fortification, meteorite or meteorite impact site without the prior written approval of the Council having been obtained on written application to the Council.

(5) No person may bring any equipment which assists in the detection of metals and archaeological and palaeontological objects and material, or excavation equipment onto any battlefield site, archaeological site, rock art site, palaeontological site, historic fortification, or meteorite impact site, or use similar detection or excavation equipment for the recovery of meteorites, without the prior written approval of the Council having been obtained on written application to the Council.

(6) (a) The ownership of any object or material associated with any battlefield site, archaeological site, rock art site, palaeontological site, historic fortification, meteorite or meteorite impact site, on discovery, vest in the Provincial Government and the Council is regarded as the custodian on behalf of the Provincial Government.

(b) The Council may establish and maintain a provincial repository or repositories for the safekeeping or display of—

(i)

archaeological objects;

(ii)

palaeontological material;

(iii)

ecofacts;

(iv)

objects related to battlefield sites;

(v)

material cultural artefacts; or

(vi)

meteorites.

(7) The Council may, subject to such conditions as the Council may determine, loan any object or material referred to in subsection (6) to a national or provincial museum or institution.

(8) No person may, without the prior written approval of the Council having been obtained on written application to the Council, trade in, export or attempt to export from the Province—

(a)

any category of archaeological object;

(b)

any palaeontological material;

(c)

any ecofact;

(d)

any object which may reasonably be regarded as having been recovered from a battlefield site;

(e)

any material cultural artefact; or

(f) any meteorite.

(9) (a) A person or institution in possession of an object or material referred to in paragraphs (a) – (f) of subsection (8), must submit full particulars of such object or material, including such information as may be prescribed, to the Council.

(b) An object or material referred to in paragraph (a) must, subject to paragraph (c) and the directives of the Council, remain under the control of the person or institution submitting the particulars thereof.

(c) The ownership of any object or material referred to in paragraph (a) vest in the Provincial Government and the Council is regarded as the custodian on behalf of the Provincial Government.

This study aims to identify and assess the significance of any heritage and archaeological resources occurring on the site. Based on the significance of these finds, the impact of the development on the heritage resources would be determined. This would then be followed by appropriate suggestions aimed at reducing the impact of development upon the heritage resources. In terms of the NHRA, a place or object is to be considered part of the national estate if it has cultural significance or other special value because of:

- a. its importance in the community, or pattern of South Africa's history;
- b. its possession of uncommon, rare or endangered aspects of South Africa's natural or cultural heritage;
- c. its potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage;

- d. its importance in demonstrating the principal characteristics of a particular class of South Africa's natural or cultural places or objects;
- e. its importance in exhibiting particular aesthetic characteristics valued by a community or cultural group;
- f. its importance in demonstrating a high degree of creative or technical achievement at a particular period;
- g. its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons;
- h. its strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa; and
- i. sites of significance relating to the history of slavery in South Africa.

The Table indicating the significance of a site, feature, or place, and which is presented below, is useful to illustrate the importance and value that a heritage, or historic item or place may have for a particular community, locally, provincially or nationally.

Figure 9. Table indicating Statement of Significance.

| Significance criteria in terms of Section 3(3) of the NHRA | | |
|---|--|---------------|
| | Significance | Rating |
| 1. | Historic and political significance - The importance of the cultural heritage in the community or pattern of South Africa's history. | None. |
| 2. | Scientific significance – Possession of uncommon, rare or endangered aspects of South Africa's cultural heritage. | None. |
| 3. | Research/scientific significance – Potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage. | None. |
| 4. | Scientific significance – Importance in demonstrating the principal characteristics of a particular class of South Africa's cultural places/objects. | None. |
| 5. | Aesthetic significance – Importance in exhibiting particular aesthetic characteristics valued by a community or cultural group. | None. |
| 6. | Scientific significance – Importance in demonstrating a high degree of creative or technical achievement at a particular period. | None. |
| 7. | Social significance – Strong or special association with a particular community or cultural group for social, cultural or spiritual reasons. | None. |
| 8. | Historic significance – Strong or special association with the life and work of a person, group or organization of importance in the history of South Africa. | None. |
| 9. | The significance of the site relating to the history of slavery in South Africa. | None. |

In this instance, regarding the graves which have been identified on site, point 7 “Social significance – Strong or special association with a particular community or cultural group for social, cultural for spiritual reasons”, on the Table of Statement of Significance would apply. Graves have strong social, emotional and spiritual significance for the family of the deceased, and for the community as a whole.

Chapter 2, Part 2, Section 36 of the National Heritage Resources Act (NHRA) discusses the significance of, and the management of graves. In this instance, along the study trajectory, the graves located adjacent to the study footprint fall under the authority of Amafa, the provincial heritage authority. 36(3) of the NHRA states that graves may not, without a permit from the provincial heritage authority, be interfered with in any way.

However, the KwaZulu-Natal Provincial Heritage Resources Act (KZN PHRA) is the preferred act to refer to in KZN because of the preeminence of the provincial heritage authority over the national in this province, and also because this act affords better protection in a more concise legislation. All graves, no matter what age, in KZN are protected under General Protections or Formal Protections.

Chapter 8, Section 35. General protection, the KZN PHRA states that:

“Traditional burial places.—(1) No grave— (a) not otherwise protected by this Act; and (b) not located in a formal cemetery managed or administered by a local authority, may be damaged, altered, exhumed, removed from its original position, or otherwise disturbed without the prior written approval of the Council having been obtained on written application to the Council.”

Once again, all graves and burial places in KZN, no matter the age, fall under General protections and Formal Protections, and therefore are afforded comprehensive protection by the provincial heritage authority.

Section 36 (4) of the NHRA states that SAHRA, or the provincial heritage authority, may not issue a permit for interfering with any grave unless it is satisfied that an applicant has made “satisfactory arrangements” for the exhumation and re-burial of the contents of the grave. This should be done at the applicant’s cost, and in accordance with any regulations and requirements made by the relevant heritage resources authority.

The NHRA goes on to state in section 36 (5) that the relevant authority (in this case, Amafa) may decide *not* to issue a permit unless a responsible heritage resources authority has made (a) a concerted effort to contact and consult with communities and individuals “who by tradition” have an interest in the respective graves or burial grounds and (b) have reached agreement with these communities and individuals about the prospects of these graves or burial grounds.

The KZN PHRA expresses the same much more simply in Chapter 8, 35 (2) when it states that:

“The Council may only issue written approval once the Council is satisfied that— (a) the applicant has made a concerted effort to consult with communities and individuals who by tradition may have an interest in the grave; and (b) the applicant and the relevant communities or individuals have reached agreement regarding the grave.”

It is important to note here that in Part 2, Section 36 (6) of the NHRA, it is:

“Subject to the provision of any other law, any person who in the course of development or any other activity discovers the location of a grave, the existence of which was previously unknown, must immediately cease such activity and report the discovery to the responsible heritage resources authority which must, in co-operation with the South African Police Service and in accordance with regulations of the responsible heritage resources authority— (a) carry out an investigation for the purpose of obtaining information on whether or not such grave is protected in terms of this Act or is of significance to any community; and (b) if such grave is protected or is of significance, assist any person who or community which is a direct descendant to make arrangements for the exhumation and re-interment of the contents of such grave or, in the absence of such person or community, make any such arrangements as it deems fit”.

According to the Field Rating Table presented below the graves adjacent, and close to the proposed pipeline trajectory should be regarded as “Generally Protected A: High to medium significance. Mitigation necessary before destruction”.

Table 3. Field rating and recommended grading of sites (SAHRA 2005)

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

Table 4. Description of Sites found within the Study Footprint

| Numbers | Name | Co-ordinates | Site Description | Significance criteria in terms of Section 3(3) of the NHRA | Field Rating | Mitigation |
|----------|---|---|--|--|-----------------------|---|
| 1 | Archaeological sites 17 Ekuvukeni Map 1,2,3,4 | 28°27'33.4 9"S 30°08'44.9 8"E | Iron Age/Historical livestock enclosure | 1; 3; 4; 7 | Local Grade IIIB | <p>Option 1: Pipeline should be moved 20 metres to the east of the stone enclosure.</p> <p>Option 2: A rescue excavation should be performed in order to preserve archaeological and historical artefacts uncovered, and to preserve the enclosure. There may also be graves involved.</p> <p>This would be performed during a Phase II heritage Assessment.</p> <p>This would be a lengthy and expensive exercise.</p> |
| 2 | 1 Old homestead Ekuvukeni Map 1,2,3,4 | 28°27'36.7 6"S 30° 08' 44.03"E | Old homestead. Has social significance, and there are likely to be graves present. | 1; 7 | Generally Protected A | <p>Pipeline should be moved 10 metres east of the homestead.</p> <p>The possibility of graves is present.</p> |
| 3 | Stone circle 1 | 28°27'42.3 0"S 30°08'51.4 7"E | Iron Age/Historical livestock enclosure | 1; 3; 4; 7 | Generally Protected A | Pipeline should be moved 10 metres west of the stone circle. |

| | | | | | | |
|---|---|--|--|------------------|-----------------------|--|
| | Ekuvukeni Map 2,3,4,5 Fig 14 | | | | | If the stone circle is to be destroyed then a Phase II archaeological excavation should be performed. |
| 4 | Stone circle 2 Ekuvukeni Map 2, 3,4,5 Fig 13 | 28°27'42.8 4"S 30°08'51.9 2"E | Iron Age/Historical livestock enclosure. | 1; 3; 4; 5; 7 | Local Grade IIIA | Pipeline should be moved 20 metres to the west of the stone enclosure. |
| 5 | 3 Archaeological site. Ekuvukeni Map 3, 6 | 28°27'45.4 1"S 30°08'47.8 7"E | Old homestead with potential subterranean graves. Possibly hidden artefacts. | 3; 7 | Generally Protected A | Pipeline should be moved 10 metres to the north of the homestead remains. |
| 6 | Old kraal / archaeological site Ekuvukeni Map 1,2,3,6,7 | 28°27'46.3 2"S 30°08'41.5 2"E | Old livestock enclosure | 3 | Generally Protected B | Pipeline should be moved 5 metres south of the old enclosure since any further would interfere with other sites. |
| 7 | 5 Modern homestead Ekuvukeni Map 3,6,7,9 | 28°27'46.2 7"S 30°08'38.1 7"E | Existing homestead | 3; 7 | Generally Protected A | No mitigation necessary, but if any subterranean graves are encountered work must stop and Amafa must be consulted |
| 8 | Stone circle 3 Ekuvukeni Map 2,3,6,8,9 | 28°27'51.0 5"S 30°08'33.4 4"E | Iron Age/Historic Stone Enclosure | 1; 3; 7 | Generally Protected B | The site should be recorded before destruction |
| 9 | Modern structure 1 | 28°28'01.9 7"S 30°08'23.5 3"E | A common modern rural structure | None | Generally Protected A | Mitigation is required before destruction from a social aspect |

| | Ekuvukeni Map 1,2,9,10,11 | | | | | |
|-----------|---|--------------------------------|--|--|-----------------------|--|
| 10 | 6 Modern graveyard Ekuvukeni Map 9, 10, 11 | 28°27'57.21"S 30°08'11.29E | An extensive enclosed modern cemetery | 3;4;6;7 | Local Grade III A | The site should be retained as a heritage site. All graves in KZN are formally protected and may not be altered or damaged. The pipeline should be placed as far as from the cemetery as possible. |
| 11 | 7 Archaeological site/Boer War? Ekuvukeni Map 10, 11 | 28°28'05.15S 30°08'16.75E | | Pending further investigation: 1;3;7;8 | Local Grade III A | The site should be retained as a heritage feature. The pipeline should be located as far south towards the road as possible. |
| 12 | Modern structure 2 Ekuvukeni Map 1,2,11 | 28°28'07.96"S 30°08'18.83E | A common modern rural structure | None | Generally Protected A | Mitigation is required before destruction from a social aspect |
| 13 | 8 Archaeological site Ekuvukeni Map 2, 12 | 28°28'25.01"S 30°07'58.96"E | A late Iron Age domestic homestead cluster | 1;3;7;8 | Generally Protected A | Mitigation is required before destruction or alteration. The pipeline should be located 20 metres to the south of this site. If the site is to be altered in any way then a Phase II Heritage Impact |

| | | | | | | Assessment should be implemented. |
|-----------|--|----------------------------------|--|-------|-----------------------|--|
| 14 | Modern homestead 9 Ekuvukeni Map 1, 13 | 28°28'32.3 1"S 30°07'43.4 6"E | A typical modern rural homestead of rectangular buildings and traditional rondawel. There may, however, be graves on this piece of ground and care should be taken regarding this possibility since all graves in KZN are formally protected. | 3;4;7 | Generally protected A | Mitigation necessary before destruction. A discourse would need to be initiated with the occupants and owners, and the presence of hidden graves ascertained. |
| 15 | Modern homestead 10 Ekuvukeni Map1, 13 | 28°28'31.9 4"S 30°07'39.6 6"E | A typical modern rural homestead of rectangular buildings and traditional rondawel. There may, however, be graves on this piece of ground and care should be taken regarding this possibility since all graves in KZN are formally protected. | 3;4;7 | Generally protected A | Mitigation necessary before destruction. A discourse would need to be initiated with the occupants and owners, and the presence of hidden graves ascertained. |
| 16 | Modern homestead 18 Ekuvukeni Map 1, 14 | 28°28'55.0 0"S 30°06'39.3 8"E | A typical modern rural homestead of rectangular buildings and traditional rondawel. | 3;4;7 | Generally protected A | Mitigation necessary before destruction. A discourse would need to be initiated with the occupants |

| | | | | | | |
|-----------|---|----------------------------------|---|-------|-----------------------|---|
| | | | There may, however, be graves on this piece of ground and care should be taken regarding this possibility since all graves in KZN are formally protected. | | | and owners, and the presence of hidden graves ascertained. The pipeline should be located no less than 20 metres south of the homestead. |
| 17 | 11 Homestead Ekuvukeni Map 1, 15 | 28°28'49.3 0"S 30°06'16.9 4"E | A typical modern extended family rural homestead of a rectangular building and traditional rondawels, both old and functional. Structured according to Central Cattle Pattern. Graves are present on this piece of ground and care should be taken regarding this since all graves in KZN are formally protected. | 3;4;7 | Generally protected A | Mitigation necessary before destruction. A discourse would need to be initiated with the occupants and owners, and the presence of visible and hidden graves ascertained. The pipeline should be located no less than 20 metres south of the homestead. Please note that all graves in KZN are formally protected. |
| 18 | 12 Homestead Ekuvukeni Map 1, 15 | 28°28'47.4 4"S 30°06'07.7 4"E | A typical modern rural homestead of rectangular buildings and traditional rondawels. There may, however, be | 3;4;7 | Generally protected A | Mitigation necessary before destruction. A discourse would need to be initiated with the occupants and owners, and the presence of |

| | | | | | | |
|-----------|---|--|---|-------|-----------------------|---|
| | | | <p>graves on this piece of ground and care should be taken regarding this possibility since all graves in KZN are formally protected.</p> | | | <p>hidden graves ascertained.</p> <p>The pipeline should be located no less than 20 metres south of the homestead</p> |
| 19 | <p>Modern homestead 19</p> <p>Ekuvukeni Map 1, 16</p> | <p>28°28'41.6 5"S 30°05'51.7 0"E</p> | <p>A typical modern rural homestead comprised of a rectangular structure and traditional rondawel.</p> <p>There may, however, be graves on this piece of ground and care should be taken regarding this possibility since all graves in KZN are formally protected.</p> | 3;4;7 | Generally protected A | <p>Mitigation necessary before destruction.</p> <p>A discourse would need to be initiated with the occupants and owners, and the presence of hidden graves ascertained.</p> <p>The pipeline should be located no less than 20 metres south of the homestead</p> |
| 20 | <p>13 Modern homestead</p> <p>Ekuvukeni Map 1, 17</p> | <p>28°28'34.5 3"S 30°04'48.4 1"E</p> | <p>A typical modern rural homestead comprising of rectangular structures.</p> <p>There may, however, be graves on this piece of ground and care should be taken regarding this possibility since all graves in KZN</p> | None | Generally protected A | <p>Mitigation necessary before destruction.</p> <p>A discourse would need to be initiated with the occupants and owners, and the presence of hidden graves, and other graves, ascertained.</p> <p>The pipeline should be located no less than 20 metres</p> |

| | | | | | | |
|-----------|--|--|---|------|-----------------------|--|
| | | | are formally protected. | | | south of the homestead. |
| 21 | Modern homestead 20 1, 17 | 28°28'32.8 6"S 30°04'42.1 7"E | A typical modern rural homestead comprising of a number of rectangular structures. There may, however, be graves on this piece of ground and care should be taken regarding this possibility since all graves in KZN are formally protected. | None | Generally protected A | Mitigation necessary before destruction. A discourse would need to be initiated with the occupants and owners, and the presence of hidden graves, and other graves, ascertained. The pipeline should be located no less than 20 metres south of the homestead. |
| 22 | Modern homestead 14 Ekuvukeni Map 1, 17 | 28°28'32.1 8"S 30°04'28.8 5"E | A typical modern rural homestead comprising of a number of rectangular structures. There may, however, be graves on this piece of ground and care should be taken regarding this possibility since all graves in KZN are formally protected. | None | Generally protected A | Mitigation necessary before destruction. A discourse would need to be initiated with the occupants and owners, and the presence of hidden graves, and other graves, ascertained. The pipeline should be located no less than 20 metres south of the homestead. |
| 23 | 15 Conglomeration of old and modern | 28°28'11.9 7"S 30°03'56.0 9"E | A typical modern rural homestead comprising of a number of | None | Generally protected A | Mitigation necessary before destruction. |

| | | | | | | |
|--|--|--|---|--|--|---|
| | <p>homesteads</p> <p>Ekuvukeni Map 1, 18</p> | | <p>rectangular structures, associated with an extended family.</p> <p>There may, however, be graves on this piece of ground and care should be taken regarding this possibility since all graves in KZN are formally protected.</p> | | | <p>A discourse would need to be initiated with the occupants and owners, and the presence of hidden graves, and other graves, ascertained.</p> <p>The pipeline should be located no less than 20 metres south of the homestead.</p> |
|--|--|--|---|--|--|---|

1. Recommendations

The Table indicating significance of a site, feature, or place, and which is presented below, is useful to illustrate the importance and value that a heritage, or historic item or place may have for a particular community, locally, provincially, or nationally.

Table 1 Evaluation and Statement of Significance

| Significance criteria in terms of Section 3(3) of the NHRA | | |
|--|--|--------|
| | Significance | Rating |
| 1. | Historic and political significance - The importance of the cultural heritage in the community or pattern of South Africa's history. | Yes |
| 2. | Scientific significance – Possession of uncommon, rare or endangered aspects of South Africa's cultural heritage. | Yes. |
| 3. | Research/scientific significance – Potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage. | Yes |
| 4. | Scientific significance – Importance in demonstrating the principal characteristics of a particular class of South Africa's cultural places/objects. | Yes. |
| 5. | Aesthetic significance – Importance in exhibiting particular aesthetic characteristics valued by a community or cultural group. | None. |
| 6. | Scientific significance – Importance in demonstrating a high degree of creative or technical achievement at a particular period. | Yes |
| 7. | Social significance – Strong or special association with a particular community or cultural group for social, cultural or spiritual reasons. | Yes. |
| 8. | Historic significance – Strong or special association with the life and work of a person, group or organization of importance in the history of South Africa. | None. |
| 9. | The significance of the site relating to the history of slavery in South Africa. | None. |

In this instance, regarding the graves which have been identified on site, point 7 “Social significance – Strong or special association with a particular community or cultural group for social, cultural for spiritual reasons”, on the Table of Statement of Significance would apply. Graves have strong social, emotional and spiritual significance for family of the deceased, and for the community as a whole.

Part 2, Section 36 of the National Heritage Resources Act (NHRA) discusses the significance of, and the management of, graves. In this instance, along the study trajectory, the graves located adjacent to the study footprint fall under the authority of Amafa, the provincial

heritage authority. 36(3) of the NHRA states that graves may not, without a permit from the provincial heritage authority, be interfered with in any way.

However, the KwaZulu-Natal Provincial Heritage Act (KZN PHRA) is the preferred act to refer to in KZN because of the preeminence of the provincial heritage authority over the national in this province, and also because this act affords better protection in a more concise legislation. All graves in KZN are protected under General Protections.

Chapter 8, Section 35. General protection, the KZN PHRA states that:

“Traditional burial places.—(1) No grave— (a) not otherwise protected by this Act; and (b) not located in a formal cemetery managed or administered by a local authority, may be damaged, altered, exhumed, removed from its original position, or otherwise disturbed without the prior written approval of the Council having been obtained on written application to the Council.”

Once again, all graves and burial places in KZN, no matter the age, fall under General protections, and therefore are afforded comprehensive protection by the provincial heritage authority.

Section 36 (4) of the NHRA states that SAHRA, or the provincial heritage authority, may not issue a permit for interfering with any grave unless it is satisfied that an applicant has made “satisfactory arrangements” for the exhumation and re-burial of the contents of the grave. This should be done at the applicant’s cost, and in accordance with any regulations and requirements made by the relevant heritage resources authority.

The NHRA goes on to state in section 36 (5) that the relevant authority (in this case, Amafa) may decide *not* to issue a permit unless a responsible heritage resources authority has made (a) a concerted effort to contact and consult with communities and individuals “who by tradition” have an interest in the respective graves or burial grounds and (b) have reached agreement with these communities and individuals about the prospects of these graves or burial grounds.

The KZN PHRA expresses the same much more simply in Chapter 8, 35 (2) when it states that:

“The Council may only issue written approval once the Council is satisfied that— (a) the applicant has made a concerted effort to consult with communities and individuals who by tradition may have an interest in the grave; and (b) the applicant and the relevant communities or individuals have reached agreement regarding the grave.”

It is important to note here that in Part 2, Section 36 (6) of the NHRA, it is:

“Subject to the provision of any other law, any person who in the course of development or any other activity discovers the location of a grave, the existence of which was previously unknown, must immediately cease such activity and report the discovery to the responsible heritage resources authority which must, in co-operation with the South African Police Service and in accordance with regulations of the responsible heritage resources authority— (a) carry out an investigation for the purpose of obtaining information on whether or not such grave is protected in terms of this Act or is of significance to any community; and (b) if such grave is protected or is of significance, assist any person who or community which is a direct descendant to make arrangements for the exhumation and re-interment of the contents of such grave or, in the absence of such person or community, make any such arrangements as it deems fit”.

According to the Field Rating Table presented below the graves adjacent, and close to the Ekuvukeni pipeline trajectory should be regarded as “Generally Protected A: High to medium significance. Mitigation necessary before destruction”.

Table 3. Field rating and recommended grading of sites (SAHRA 2005)

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

2. Conclusions.

A phase one heritage survey of the proposed upgrading of the Ekuvukeni Pipeline, Alfred Duma Local Municipality and uThukela District Municipality, KwaZulu-Natal identified various heritage sites in the greater area. This landscape is an exceedingly rich archaeological, social and cultural landscape that forms a palmset of human actions and behavior over many centuries.

Heritage sites and features identified on this landscape includes archaeological sites, old homesteads, modern homesteads, potential graves, modern structures, Iron Age stone circles or enclosures, possible Boer War sites and a modern cemetery. At least two of these sites, both Later Iron Age stone walled enclosures (Stone Walled Circle 1 and Stone Walled Circle 2, Table 4), are situated across the proposed pipeline trajectory. Mitigation will be required for these sites as they both have a high heritage rating and they are directly threatened by the proposed development. The following mitigation will have to apply:

- The pipeline trajectory must be moved 20m to the east of Stone Walled Circle 1 (Table 4)
- The pipeline trajectory must be moved 10m to the east of Stone Circle Walled 2 (Table 4)

Alternatively a Phase Two Heritage Assessment should be conducted with the view to perform a rescue excavation prior to any development.

The remaining sites are all situated within 50 m but not closer than 2m from the proposed pipeline trajectory (Table 4). It is the opinion of the consultants that the proposed

development will have a minimal impact on all these sites if the developer respects a buffer as indicated in Table 4 for each site. None of these sites may be damaged or altered in any way and the buffer zone must be strictly enforced.

There is no reason from a heritage perspective why the development may not proceed as planned if the developer strictly adheres to these stipulations.

It is furthermore advised that the heritage consultant conduct a walk through of the footprint once the pipeline trajectory has been marked on the ground. This stipulation is especially relevant in those areas where the pipeline has already been constructed.

The Phase 1 Desktop Paleontological assessment indicates that the footprint is located in an area with a high fossil sensitivity rating. An Amafa accredited palaeontologist will need to conduct a ground survey of the pipeline trajectory. A protocol of finds will also have to be followed.

Attention is drawn to the South African National Heritage Resources Act, 1999 (Act No. 25 of 1999) (NHRA) and the KwaZulu-Natal Heritage Act (Act No. 4 of 2008) which requires that operations that expose paleontological, archaeological and historical remains should cease immediately, pending evaluation by the provincial heritage agency.

References

Bryant, A. T. 1965. *Olden times in Zululand and Natal*. Cape Town: C. Struik.

Derwent, S. 2006. *KwaZulu-Natal Heritage Sites: A Guide to Some Great Places*. David Phillips: Cape Town

Huffman, T. N. 2007. *Handbook to the Iron Age: The Archaeology of Pre-colonial Farming Societies in Southern Africa*. University of KwaZulu-Natal Press. Pietermaritzburg.

Kuper, A. 1997. 'The academic frontier: History and Social Anthropology in South Africa.' In P. McAllister (ed) *Culture and the Commonplace. Anthropological Essays in Honour of David Hammond-Tooke*. Johannesburg: Witwatersrand University Press,69-84.

KZN Museum Database.

Maggs, T. The Iron Age farming communities. In Duminy, A. and Guest, B. 1989. *Natal and Zululand: from Earliest Times to 1910. A New History*. Pg. 28-46. University of Natal Press. Pietermaritzburg.

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

Omer-Cooper, J.D. 1975. *The Zulu Aftermath. A Nineteenth-Century Revolution in Bantu Africa*. Norfolk: Lowe & Brydone Ltd.

Pakenham, Thomas. 1979. The Boer War. Random House.

Penner, D. 1970. Archaeological Survey in Zululand Game Reserves. Natal Parks Board. Unpublished Report.

SAHRA, 2005. *Minimum Standards for the Archaeological and the Palaeontological Components of Impact Assessment Reports, Draft version 1.4*.

Wright, J. & C. Hamilton 1989. 'Tradition and transformations. The Phongolo-Mzimkhulu region in the late eighteenth and early nineteenth centuries.' In A. Duminy and BGuest (eds.) *Natal and Zululand from Earliest Times to 1910. A New History*. Pietermaritzburg: University of Natal, 49-82.

Appendices

Photographs



Figure 9. View over the project area. The proposed pipeline follows the existing road trajectory for most of the way.



Figure 10. Although homesteads are situated along the proposed pipeline trajectory none of them had associated graves.



Figure 11. A large cemetery is situated directly adjacent to the proposed pipeline trajectory (north bank). However, it is well demarcated and protected by a concrete fence.



Figure 12. A sturdy concrete fence surround the local cemetery. There is no need for mitigation



Figure 13. Stone Circle 2 – a Later Iron Age Site



Figure 14. Stone Circle 1 – a Later Iron Age Site. It is situated adjacent to Stone Circle 2 and most probably belongs to the same site.



Figure 15. The western section of the proposed pipeline.



Figure 16. The eastern section of the proposed pipeline.



Figure 17. Close-up of the extreme eastern section of the proposed pipeline.



Figure 18. Two stone circles adjacent to the proposed pipeline (western section). These are probably Later Iron Age sites. The two individual circles most probably belongs to the same site.



Figure 19. Close-up of stone circles mentioned above.



Figure 20. Remains of recent kraals (livestock enclosures). These have no heritage value.



Figure 21. Remains of relatively recent livestock enclosures adjacent to the pipeline trajectory. These have no heritage value.



Figure 22. Stone Circle 3



Figure 23. Large Cemetery on the western side of the proposed pipeline trajectory.



Figure 24. Modern structure with no heritage value.



Figure 25. Modern structures with no heritage value adjacent to proposed pipeline.



Figure 26. Stone circle 8.



Figure 27. Modern homesteads with no visible graves adjacent to the proposed pipeline.



Figure 28. Modern homesteads with no visible graves adjacent to the proposed pipeline



Figure 29. Modern homesteads with no visible graves adjacent to the proposed pipeline.

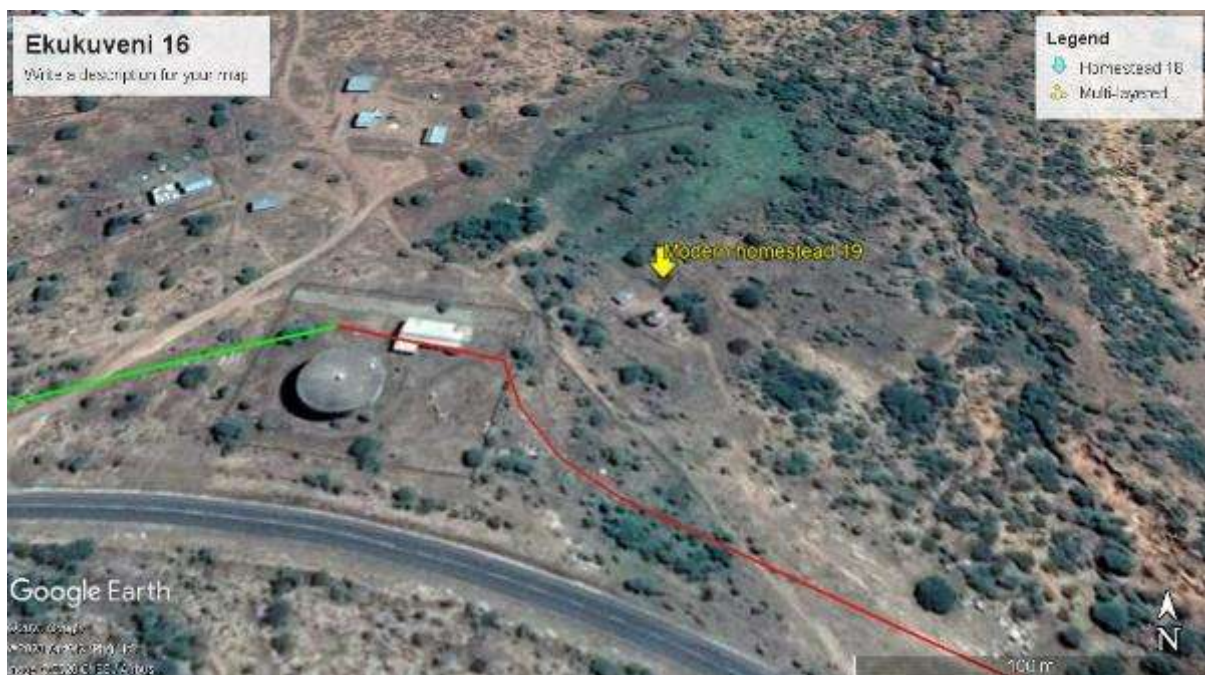


Figure 30. Modern homestead with no visible graves in near vicinity of the proposed pipeline and associated reservoir.



Figure 31. Modern homesteads with no visible graves adjacent to the proposed pipeline trajectory (western section).



Figure 32. Modern homestead with no visible graves near the starting point of the proposed pipeline (western section).

