

**CULTURAL HERITAGE IMPACT ASSESSMENT OF
THE PROPOSED DRIEFONTEIN PIPELINE
DEVELOPMENT, EMNAMBITHI/LADYSMITH
LOCAL MUNICIPALITY**



ACTIVE HERITAGE CC.

Prepared by:

Frans E Prins, MA (Archaeology)

Sian M Hall (Hons) Anthropology

P.O. Box 947

Howick

3290

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Tel: 033 3307729

Cell: 0834739657

E-mail: feprins@gmail.com

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LIST OF ABBREVIATIONS AND ACRONYMS

EIA	Early Iron Age
ESA	Early Stone Age
HISTORIC PERIOD	Since the arrival of the white settlers - c. AD 1836 in this part of the country
IRON AGE	Early Iron Age AD 200 - AD 1000 Late Iron Age AD 1000 - AD 1830
LIA	Late Iron Age
LSA	Late Stone Age
MSA	Middle Stone Age
NEMA	National Environmental Management Act, 1998 (Act No. 107 of 1998 and associated regulations (2010).
NHRA	National Heritage Resources Act, 1999 (Act No. 25 of 1999) and associated regulations (2008)
SAHRA	South African Heritage Resources Agency
STONE AGE	Early Stone Age 2 000 000 - 250 000 BP Middle Stone Age 250 000 - 25 000 BP Late Stone Age 30 000 - until c. AD 200

EXECUTIVE SUMMARY

A cultural heritage ground survey of the proposed Driefontein Water Pipeline near Ladysmith identified five heritage sites in the general study area. However, all these sites are situated more than 100m from the proposed pipeline route. It would therefore be possible to maintain a buffer zone of at least 20m around each of these sites without altering the preferred route. Alternatively, mitigation will be necessary and an archaeological rescue excavation may need to be conducted before any site may be destroyed or altered. 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 archaeological or historical remains should cease immediately, pending evaluation by the provincial heritage agency.

1 BACKGROUND INFORMATION ON THE PROJECT

The consultants were approached by Sivest to conduct a heritage impact assessment (HIA) of the study area.

According to the National Heritage Resources Act, 1999 (NHRA) (Act No. 25 of 1999), the heritage resources of South Africa include:

- a. places, buildings, structures and equipment of cultural significance;
- b. places to which oral traditions are attached or which are associated with living heritage;
- c. historical settlements and townscapes;
- d. landscapes and natural features of cultural significance;
- e. geological sites of scientific or cultural importance;
- f. archaeological and palaeontological sites;
- g. graves and burial grounds, including-
 - 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 furthermore 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, the impact of the development on the heritage resources would be determined. Then appropriate actions to reduce the impact on the heritage resources would be put forward. 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.

Table 1. Background information

Consultants:	Frans Prins & Sian Hall (assistant)
Type of development:	Approximately 80 km of pipeline development linking a water reservoir at Ladysmith with those near Wasbank, and Ekuvukeni (Fig 1).
Rezoning or subdivision:	Rezoning
Terms of reference	To carry out a Heritage Impact Assessment
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 (Act No. 4 of 2008)

1.1. Details of the area surveyed:

Footprint: The proposed footprint can be accessed by travelling north out of Ladysmith on the N11 towards Dundee. Turn right on the R602 in a easterly direction and follow the road towards Ekuvukeni. . The GPS coordinates of the starting point at Ladysmith is 28° 32' 1.44"S 29° 46' 2.21"E and the end point near Ekuvukeni is 28° 27' 32.32" S 30° 8' 48.56"E. Smaller deviations from this route are indicated in Fig 1.

Current land use: The greatest portion of the footprint is bordered onto by commercial farms and some communal land. The Nambiti Private Game Reserve borders onto the proposed pipeline route near the R602. The starting point at Ladysmith and the end point at Ekuvukeni are both urban areas. Other land uses within the study area include agriculture and small villages with scattered dwellings.

2 BACKGROUND TO ARCHAEOLOGICAL HISTORY OF AREA

Portions of the greater Ladysmith area have been systematically surveyed for archaeological heritage sites in the past. These were mostly conducted by archaeologists attached to the 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), and 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 but some heritage sites occur close to the proposed pipeline route..

The San were the owners of 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 2 November 1899 until 28 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 Elandsplaagte, Spionkop, Wagon Hill, Caesars Camp, Lombards 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).

3 BACKGROUND INFORMATION OF THE SURVEY

3.1 Methodology

A desktop study was conducted of the SAHRA inventory of heritage sites. Unfortunately this database is incomplete and of only limited use. In addition, the archaeological database of the KwaZulu-Natal Museum was consulted. This data base indicated more than 100 heritage sites in the greater Ladysmith area.

A ground survey of the proposed developments following standard and accepted archaeological procedures was conducted. The ground survey followed the available roads in the project area. However, there are many mountainous areas with no road access that transverse the project area. The ground survey was therefore complimented with a desktop survey of available aerial photographs of the project area. The latter method located almost 40 Iron Age and late historical sites.

3.2 Restrictions encountered during the survey

3.2.1 Visibility

Visibility during the site visit was good.

3.2.2 Disturbance.

No overt disturbance or vandalism of any heritage features or archaeological sites was noted. However, stone robbing of Iron Age walling has taken place where such sites are situated in the close vicinity of contemporary rural settlements.

3.3 Details of equipment used in the survey

GPS: Garmin Etrek

Digital cameras: Canon Powershot A460

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

Towns: Ladysmith

Municipality: Emnambithi

4.2 Description of the general area surveyed

The proposed water pipeline starts at a reservoir in the northern parts of Ladysmith and then runs roughly parallel to the N11 towards Dundee. However, before it reaches Dundee the route turns right alongside the R602 in an easterly direction and follows the road towards Ekuvukeni. Smaller deviations from this route are indicated in Fig 1.

4.3 Description of sites

Five heritage sites occur in the greater project area. These include two Later Iron Age Stone Circles, a Cemetery, two historical dwellings, and a military grave yard associated with the Anglo-Boer War. A description, GPS coordinates, and

assessment of each site is provided in Table 2. The distribution of these heritage sites is indicated on Figure 2.

Table 2. Heritage sites located during the ground survey in close association with proposed pipe line.

No	Heritage category	Description	Significance	Type of Mitigation	GPS coordinates	Survey method
1	LIA site (Fig 3)	Two single stone walled circles. Situated on the eastern bank of the N11 approximately 100m from the road. Each circle is approximately 20m in diameter.	Medium to high	Not applicable as site is situated more than 100m from proposed pipeline. However, maintain 20m buffer zone around site	S 28° 29'42.68" E 29° 50'27.76 "	Ground survey
2	LIA site (Fig 4)	Single stone walled circle. Approximately 25m diameter. Situated approximately 250m to the north of proposed pipeline.	Medium to high	Not applicable as site is situated more than 100m from proposed pipeline. However maintain 20m buffer zone around site	S 28° 18'52.71" E 30° 3'42.36"	Desktop aerial photograph
3	Historical residential building (Fig 5)	Residential building associated with Elandslaagte Railway Station. Appears to be approximately 80 years old.	Medium to high	Not applicable as site is situated more than 50m from the proposed pipeline. However, maintain	S 28° 24' 26.30" E 29° 57'24.21"	Ground Survey

4	Elandslaagte Battle Site Military Graveyard (Fig 6)	Military Cemetery with the graves and memorial to British soldiers who died at the Battle of Elandslaagte in 1899 (Derwent 2006)	High (with potential Provincial Heritage Site grading)	Not applicable as proposed pipeline is situated more than 100m from this heritage site. However, maintain 20m buffer zone around site	S 28° 24'49.19" E 29° 56'53.43"	Ground survey.
5	Modern Cemetery (Fig 7)	Large Cemetery covering an area of approximately 250m x 220m. The graves are all relatively modern with the vast majority younger than 60 years old. The cemetery is situated on the edge of the Ekuvukeni Township.	Medium	Not applicable as proposed pipeline is situated more than 100m to the north of the cemetery. However, maintain a 20m buffer zone around site	S 28° 27' 53.90" E 30° 08' 21.57"	Desktop study aerial photograph

4.4 Summary of findings

Five heritage sites have been located along the trajectory of the proposed pipeline. These include two Later Iron Age sites, one historical residential building, a Boer War era military graveyard, and a modern cemetery. All of these sites are situated more than 80m from the proposed pipeline and none of them are threatened by the development. It would be possible to maintain a buffer zone of at least 20m around each of these sites without altering the preferred route. Alternatively, mitigation will be

necessary and an archaeological rescue excavation may need to be conducted before any site may be destroyed or altered.

5 STATEMENT OF SIGNIFICANCE (HERITAGE VALUE)

The known heritage sites in the general area of the proposed power lines have been rated according to SAHRA standards (Table 3 & Table 4). The majority of these have been rated as high to medium significance. In other words mitigation will be necessary before a site may be altered or destroyed. A second phase heritage impact assessment will be called for and Amafa must issue a permit for any such rescue excavation to take place.

5.1 Field Rating

Table 2 provides a rating for each and every site with reference to the criteria as outlined in Table 3. It is important that the developer takes cognisance of the fact that all these sites are protected by national and provincial heritage legislation and that a buffer of at least 20m diameter must be maintained around each site. No destruction or alteration of any of these sites is allowed.

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

6 RECOMMENDATIONS

The construction of the proposed water pipelines along the preferred route as identified by the developer may proceed in terms of heritage values as no known heritage sites are in any immediate danger of being damaged or altered. However, the following measures need to be adhered to:

- Avoid all heritage sites; a golden rule is to maintain a buffer zone of at least 20m around identified sites.
- Avoid sandstone outcrops and rock faces, where possible, as these areas may harbour unknown rock art sites and shelters with Later Stone Age archaeological deposits.
- Only use established roads during the construction process. All secondary access roads planned need to be surveyed for heritage sites before construction may commence.
- Should the developer decide to move the proposed pipeline closer than 20m to any of the identified heritage sites then a second phase heritage impact assessment should be initiated. Should any of the colonial-era heritage sites be affected then a built environment heritage specialist consultant should be approached for the second phase heritage impact assessment.
- Should any heritage material or artefacts be located during the construction process then all activities should stop in the immediate vicinity of the site and the local heritage agency Amafa contacted for further evaluation.

7 MAPS AND PHOTOGRAPHS

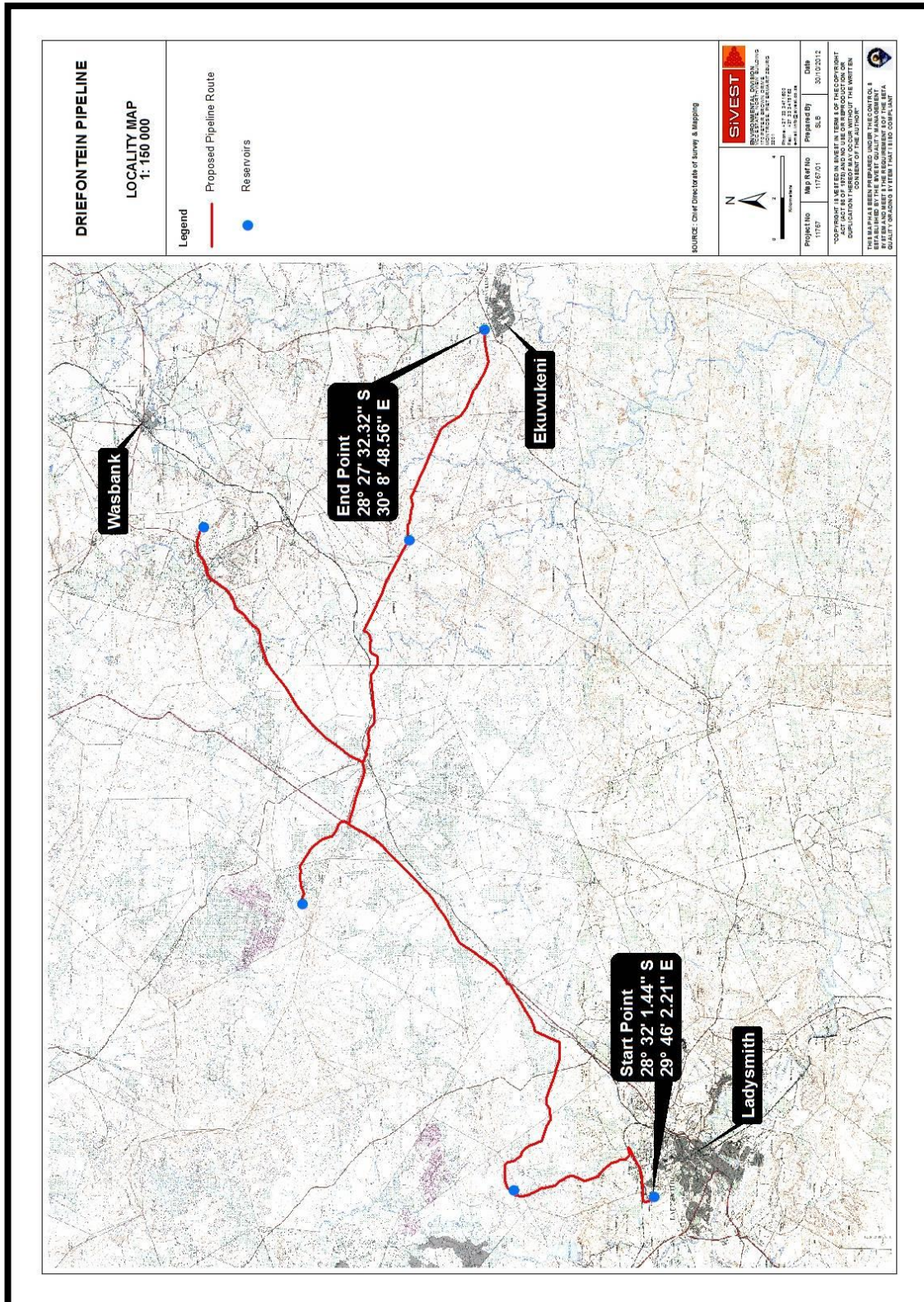


Figure 1. Topographical map showing the location of the proposed Driefontein pipeline.

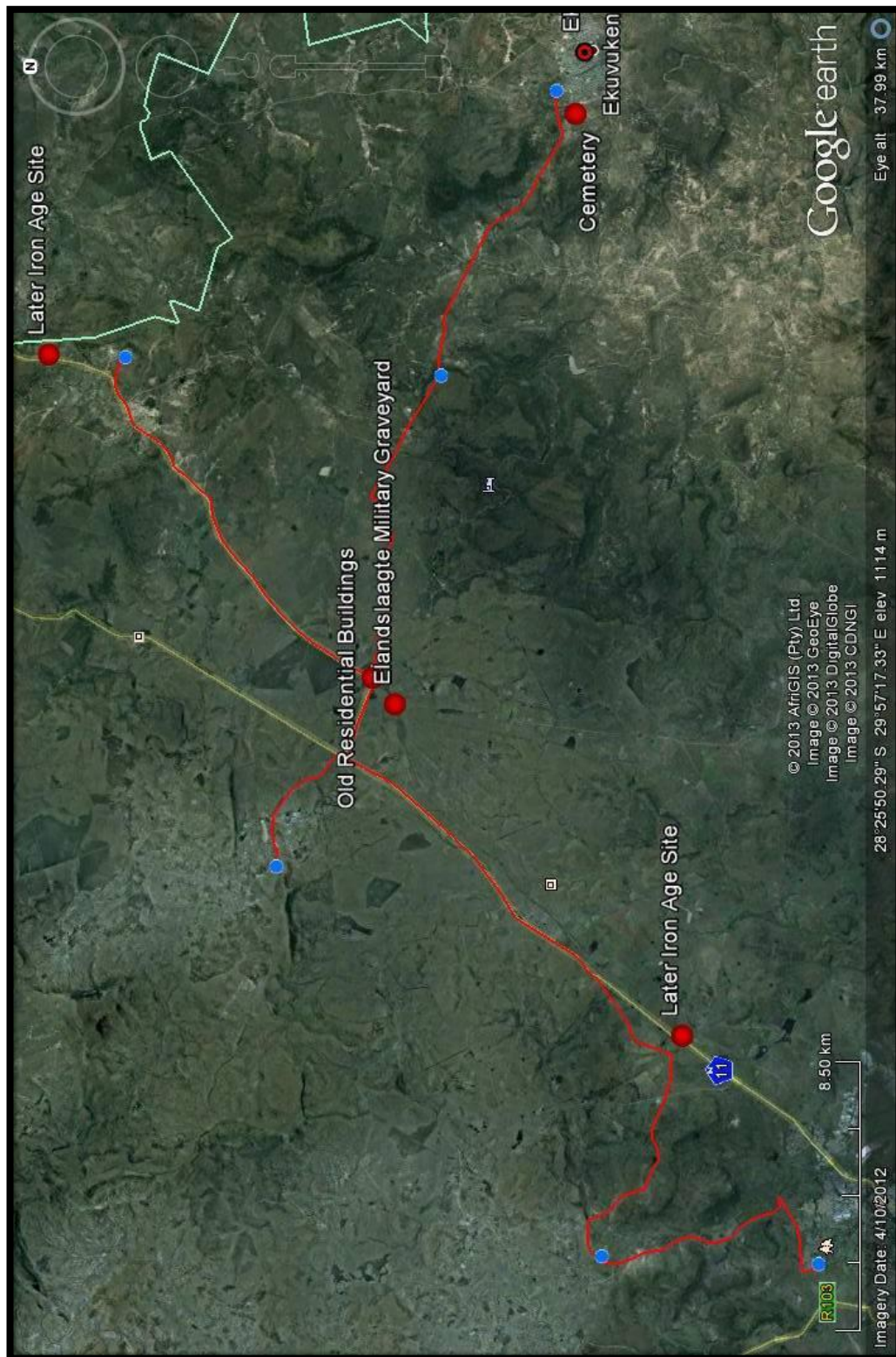


Figure 2. Google aerial photograph showing the distribution of heritage sites in the near locality of the proposed Driefontein pipeline.



Figure 3. Late Iron Age stone circle ,approximately 100m from the proposed pipeline.



Figure 4. Later Iron Age stone circle, approximately 80m from the proposed pipeline.



Figure 5. Historical era residential home.



Figure 6. Modern Cemetery

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