A CULTURAL HERITAGE IMPACT ASSESSMENT OF THE PROPOSED ESTABLISHMENT OF +/- 56KM IMPALA-MTUBATUBA 2ND 132KV POWERLINE AND 132KV LOOP-IN-LOOP-OUT AT NSELENI 132/22KV SUBSTATION AND ESTABLISH A 2ND 132KV TEE LINE FROM THE EXISTING 1ST IMPALA-MTUBATUBA POWERLINE TO CREATE A LOOP-IN-LOOP-OUT ARRANGEMENT AT KWAMBONAMBI SUBSTATION.

ACTIVE HERITAGE cc.

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30 November 2015

TABLE OF CONTENTS

LIST OF TABLES

LIST OF ABBREVIATIONS AND ACRONYMS

EIA	Early Iron Age
ESA	Early Stone Age
HISTORIC PERIOD	Since the arrival of the white settlers - c. AD 1820 in this part of the country
IRON AGE	Early Iron Age AD 200 - AD 1000 Late Iron Age AD 1000 - AD 1830
IIA	Intermediate Iron Age
ISA	Intermediate Stone Age
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 (2006).
NHRA	National Heritage Resources Act, 1999 (Act No. 25 of 1999) and associated regulations (2000)
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 first phase cultural heritage survey was conducted of the proposed Impala-Mtubatuba 2nd 132kV Powerline and 132kV Loop-in-Loop-out at Nseleni 132/22kV Substation and establish a 2nd 132kV Tee Line from the existing 1st Impala-Mtubatuba Powerline to create a Loop-in-Loop-out arrangement at Kwambonambi Substation footprint. No heritage sites were located during the ground survey. However, the desktop survey identified a Later and Middle Stone Age tool scatter adjacent to the preferred corridor. This locality was visited but no archaeological material was observed on the surface. There is no known archaeological reason why the development may not proceed as planned. However, it should be noted that the general area is rich in archaeological sites as well as more recent grave sites in the locales of rural settlements. Construction work may expose material and attention is drawn to the South African Heritage Resources Act, 1999 (Act No. 25 of 1999) 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

Table 1. Background information

Consultant:	Frans Prins (Active Heritage cc) for Ludloko Developments
Type of development:	A proposal has been put forward by Eskom Holdings to construct a 56km powerline from Impala substation (31°56'50.05"E; 28°45'59.45"S) situated on John Ross Road (P496) which links Richards Bay and Empangeni, to Mtubatuba substation (32°10'38.92"E; 32°10'38.92"E) situated adjacent to road to Mtubatuba and N2. Two corridors have been investigated. The corridors stretch between Impala and Mtubatuba and loop in and out of Nseleni substation (31°59'41.24"E 28°39'35.60"S) situated at Nseleni area. Land use between Impala and Mtubatuba substation is characterised by sugarcane, commercial tree plantations, and rural settlements. Three tribal authorities are traversed by the corridors. The scope of the project thus entails the establishment of a Twin Kingbird 132kV line (300 MVA) between Impala substation and Mtubatuba substation.
Rezoning or subdivision:	Rezoning

Terms of reference	To carry out a Heritage Impact Assessment as subcontracted by Ludloko Developments.
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)

1.1. Details of the area surveyed:

The proposed corridors and alternative corridors run through two districts Uthungulu and Umkhanyakude District municipalities in northern KwaZulu Natal. Both the corridors start at Impala substation (31°56'50.05"E; 28°45'59.45"S) which is situated at uMhlathuze Local Municipality and the corridors extend through Nseleni Tribal Area meandering through rural settlement which is located within uMhlathuze Local Municipality and converge at Nseleni substation (31°59'41.24"E 28°39'35.60"S). The corridors upon leaving Nseleni substation wind through Mhlana Tribal Area which is part of uMfolozi Local Municipality. Both uMhlathuze and uMfolozi Local Municipalities are two of the six local municipalities under uThungula District Municipality. Both corridors cross the UMfolozi River and run across Mpunkunyoni Tribal Area and both corridors end at Mtubatuba substation situated within Mtubatuba Local Municipality which is one of the six municipalities within Umkhanyakude District municipality.

The area is characterised by undulating hills comprising of different types of land use. Main land use along the alternative corridors is characterised by sugarcane and tree plantation and rural settlements (Figs 4& 5). The area extending from the substation is characterised by sugarcane plantations which are intercepted by large tracks of commercial trees. Nseleni substation is located somehow in the middle of the two corridors. Open areas in between houses afford the meandering of the corridors. The final route location will be discussed with the affected landowners and approvals will be provided accordingly. Significant rivers flow through the districts and streams craft the area. A number of wetlands exist mainly along the pink alternative corridor. Positioning of towers near or along riparian areas as the powerline spans across rivers and streams will be determined by the size of the riparian area. Spans between towers will be affected by terrain.

The coordinates for the proposed corridors is given Table 2.

Table 2. Coordinates for Corridor 1 and Corridor

COORDINATES FOR CORRIDOR 1			LO-31	
-92749.98	3183864.31	28°46'02.8014"	31°56'59.0522"	1
-92864.60	3183674.34	28°45'56.6020"	31°57'03.2210"	2
-92619.94	3183440.91	28°45'49.0843"	31°56'54.1347"	3
-91906.56	3183626.28	28°45'55.2884"	31°56'27.8952"	4
-90987.39	3183111.36	28°45'38.8000"	31°55'53.8676"	5
-90955.38	3182898.53	28°45'31.8960"	31°55'52.6265"	6
-90552.96	3182413.36	28°45'16.2409"	31°55'37.6556"	7
-90521.81	3182285.94	28°45'12.1105"	31°55'36.4711"	8
-90471.94	3181253.18	28°44'38.5817"	31°55'34.3372"	9
-90640.54	3181093.08	28°44'33.3395"	31°55'40.5043"	10
-91230.30	3180716.57	28°44'20.9617"	31°56'02.1284"	11
-92256.74	3179701.67	28°43'47.7377"	31°56'39.6555"	12
-92687.43	3179059.55	28°43'26.7723"	31°56'55.3363"	13
-91683.78	3177497.88	28°42'36.3112"	31°56'17.9052"	14
-91902.92	3177044.83	28°42'21.5412"	31°56'25.8465"	15
-92252.30	3176680.36	28°42'09.6145"	31°56'38.6105"	16
-92432.61	3176178.43	28°41'53.2666"	31°56'45.1058"	17
-93270.81	3174774.03	28°41'07.4385"	31°57'15.5669"	18
-94027.61	3173966.05	28°40'41.0001"	31°57'43.2001"	19
-94289.43	3173487.83	28°40'25.4001"	31°57'52.6999"	20
-94572.95	3173351.56	28°40'20.8999"	31°58'03.1001"	21
-94710.87	3172752.26	28°40'01.3999"	31°58'08.0000"	22
-95445.08	3172299.46	28°39'46.4999"	31°58'34.8999"	23
-96331.66	3172149.71	28°39'41.4000"	31°59'07.5000"	24
-96960.20	3172007.12	28°39'36.6001"	31°59'30.6001"	25
-97209.11	3172120.03	28°39'40.1999"	31°59'39.7998"	26

COORDINATES FOR CORRIDOR 2			LO-31	
-92870.46	3183837.93	28°46'01.9135"	31°57'03.4852"	1
-94146.24	3184143.37	28°46'11.5000"	31°57'50.6000"	2
-94380.67	3184006.71	28°46'06.9999"	31°57'59.2001"	3
-94979.96	3183742.48	28°45'58.2600"	31°58'21.2098"	4
-96163.28	3183005.21	28°45'33.9999"	31°59'04.6001"	5
-98589.55	3178129.71	28°42'55.0000"	32°00'32.5001"	6
-98559.16	3177870.81	28°42'46.6001"	32°00'31.2998"	7
-98824.23	3177343.44	28°42'29.3999"	32°00'40.9000"	8
-99167.27	3177226.27	28°42'25.5000"	32°00'53.5000"	9
-99937.33	3175748.71	28°41'37.3000"	32°01'21.4001"	10
-100015.85	3175731.02	28°41'36.7036"	32°01'24.2866"	11
-100068.16	3175604.64	28°41'32.5846"	32°01'26.1733"	12
-100055.21	3175346.79	28°41'24.2141"	32°01'25.6149"	13
-99969.63	3175216.43	28°41'20.0043"	32°01'22.4217"	14
-99693.95	3175017.91	28°41'13.6336"	32°01'12.2058"	15
-98857.05	3175086.73	28°41'16.1000"	32°00'41.4042"	16
-98243.91	3174584.27	28°40'59.9499"	32°00'18.6662"	17
-98193.82	3174070.88	28°40'43.2902"	32°00'16.6623"	18
-98314.02	3173768.42	28°40'33.4343"	32°00'20.9951"	19
-98126.75	3173519.98	28°40'25.4169"	32°00'14.0217"	20
-98055.21	3173502.79	28°40'24.8781"	32°00'11.3819"	21
-97801.92	3173230.65	28°40'16.1089"	32°00'01.9704"	22
-97696.14	3172947.34	28°40'06.9365"	31°59'57.9878"	23
-97512.29	3172709.27	28°39'59.2546"	31°59'51.1445"	24
-97287.10	3172516.81	28°39'53.0651"	31°59'42.7933"	25
-97196.19	3172189.64	28°39'42.4641"	31°59'39.3454"	26
-97169.71	3172107.89	28°39'39.8163"	31°59'38.3454"	27

2 BACKGROUND TO ARCHAEOLOGICAL HISTORY OF AREA

The greater Mtubatuba area has been relatively well surveyed for archaeological heritage sites by employees of the former Natal Parks Board as well as archaeologists associated with the then Natal Museum, the Ondini Cultural Museum and Amafa. It is especially the extensive surveys conducted by Penner (1970), and Hall (1980) to the south of the study area but also subsequent research by Feely (1980) and Anderson (2001) that has thrown light on the heritage resources of the area.

The available evidence, as captured in the KwaZulu-Natal Museum heritage site inventories, indicates that this area contains a wide spectrum of archaeological sites covering different time-periods and cultural traditions. One hundred and eight archaeological sites are listed for the greater Mtubatuba/St Lucia area. Most of these occur closer to the coast to the immediate east of the study area. Six Early Stone Age sites have been recorded within 20km from the study area. These sites date back to between 300 000 and 1.5 million years ago. Two of these sites also contain Middle Stone Age tools. Middle Stone Age sites are associated with anatomically modern people and dates back to approximately 40 000 to 200 000 years ago. The vast majority of Middle Stone Age sites in the greater Mtubatuba area are open-air sites. They therefore do not occur in archaeological context and have limited excavation value.

Around 1 700 years ago an initial wave of Early Iron Age People settled along the inland foot of the sand dunes on the coastal areas to the east of the study area. Here they settled on sandy but humus rich soils which would have ensured good crops for the first year or two after they had been cleared. These early agro-pastoralists produced a characteristic pottery style known as Matola. The Matola people also exploited the wild plant and animal resources of the forest and adjacent sea-shore. The communities seems to been small groups of perhaps a few dozen slash-and burn cultivators, moving into a landscape sparsely inhabited by Later Stone Age San hunter-gatherers.

By 1500 years ago another wave of Iron Age migrants entered the area. Their distinct ceramic pottery is classified to styles known as “Msuluzi” (AD 500-700), Ndondondwane (AD 700-800) and Ntshekane (AD 800-900). Two sites belonging to these periods occur within 5km from the study area in association with Early Stone Age tools. (Maggs 1989; Huffman 2007).

An astonishing 82 Later Iron Age sites (belonging to the period 1200 AD – 1880 AD) has been recorded in the Hluhluwe Nature Reserve to the west of the study area. Some have

also been recorded closer to the coast to the east of the study area (Anderson 2001). The vast majority of these sites were inhabited by early Nguni-speaking agriculturists. These communities were the immediate ancestors of the present-day Zulu-speaking people of the area. Their ancestors migrated from the great lake region of Eastern Africa around 1100 years ago. The greater Hluluwe-Imfolozi Park area is particularly well known for its central situation relative to the development of the Zulu state of King Shaka Zulu in the early 1800's. Eighteen historical period sites that relate directly to the early formation of the Zulu Kingdom have been recorded in the area. Groups who were tributary to the Zulu state settled in the Mtubatuba area to the east. Here the historical occupation of the land can be traced back to the 1700s – if not earlier (Bryant 1905). People living in the study area were part of the Mpukunyoni tribe, originally a Thonga-speaking people, who had arrived in the area in 1770. One sub-group, the Mkwanazis, paid allegiance to Somkhele in the early 1900s. A Town in the area was named after this chief and later renamed Matubatuba, after Somkhele s son who succeeded him, indicating the significant presence of this group in the area. With the rise of the Zulu state to the south west of the study area people in the greater St Lucia/Mtubatuba area also adopted a Zulu ethnic identity. According to oral history the local tribes people in the area remained loyal to the Zulu king throughout the colonial period. Oral history suggests that the local population allowed the Dukuduku forest to be used as a refuge during some of the skirmishes with the British. However, the area also fell under British colonial administration with the conquest of the Zulu state in 1879. By 1887 the pressure on the British government to give white settlers access to the fertile lands in Zululand had grown with the growth of the sugar industry in the province, resulting in the allocation of farms on the Mfolosi-Matubatuba flood plain in 1910. Pressure on the land continued with the discovery of anthracite in Somkhele, which led to the establishment of a mine, the building of a railway line in 1903 and the settlement of workers in the area. After World War 2, the government offered whites farmland in the Monzi area. In about 1964, government began a new effort to remove more people from the area to clear space for commercial agriculture. In addition, the Mfolosi-Hluhluwe corridor declaration began to clear the forest of people for conservation purposes. In 1973/74, more people were removed when the western bank of St Lucia was cleared for forestry purposes and between 1974 and 1979 a missile range was established at St Lucia, resulting in more forced removals. Development of the area has included cultivating the Mfolosi flats as well as building a golf court (Afra Report 2003).

3 BACKGROUND INFORMATION OF THE SURVEY

3.1 Methodology

A desktop study was conducted of all the relevant archaeological databases housed in the KwaZulu-Natal Museum. In addition, the available archaeological literature covering the greater Mtubatuba area was also consulted. The SAHRIS website was studied and relevant heritage impact assessment reports consulted. Aerial photographs of the area were studied to identify potential Iron Age and historical period sites. A ground survey of the footprint, following standard and accepted archaeological procedures, was conducted. The relevant powerline routes were surveyed in cordons of 50m. Particular care was taken to identify potential graves in the environs of rural settlements.

3.2 Restrictions encountered during the survey

3.2.1 Visibility

Visibility was good.

3.2.2 Disturbance

No disturbance of any potential heritage features was noted.

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: Mtubatuba
Municipality: Mtubatuba Local Municipality and Mkhanyakude District Municipality

4.2 Description of the general area surveyed

The preferred option (Corridor 1) as well as the alternative route (Corridor 2) were intensively surveyed. No heritage sites were noted in a buffer of 50m along the relevant corridors. Particular care was taken to locate graves along the proposed routes but none were visible on the surface. Old records of the KwaZulu-Natal Museum indicate the potential location of a surface scatter of Later and Middle Stone Age in the near environs of Corridor 1 (Fig 3). The GPS coordinates for this potential sites are given as:

S 28° 27’ 57.85” E 32° 08’ 30.15”

However this locales was visited and no heritage sites of features occur at the proposed GPS coordinates (Figs 6 & 7). It is possible that the site has been destroyed by rural developments in the immediate vicinity of the proposed site.

Modern graves do occur in association with rural homesteads and settlements situated in the greater project area. However, none were observed along the proposed powerline routes as well as at the relevant substations. It is possible, however, that “invisible graves” do occur in the area and special care must be taken to take note of these during the construction phase of the project.

4.3 4.3 Heritage Sites Identified

No heritage sites were identified as such.

5 STATEMENT OF SIGNIFICANCE (HERITAGE VALUE)

As there are no heritage sites on the study area the area is not significant in terms of heritage values (Table 3)

Table 3. 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.	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.

5.1 Field Rating

The field rating criteria as formulated by SAHRA (Table 4) does not apply to the footprint as no heritage sites or features have been identified on the footprint.

Table 4. 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 proposed powerline development may proceed in terms of heritage values as no heritage sites or features are in any danger of being destroyed or altered. Both proposed corridor routes would be acceptable from a heritage perspective. However, it should be pointed out that the greater area is relatively rich in archaeological sites and features (Anderson 2001). It is also possible that “invisible” graves may occur in association with rural homesteads situated along the proposed corridors. It would be wise to avoid existing homesteads and allow a buffer of at least 15m around these. Construction activities may expose grave sites and archaeological artefacts not visible on the surface. The KwaZulu-Natal Heritage Act requires that operations exposing archaeological and historical residues should cease immediately pending an evaluation by the heritage authorities.

7 MAPS AND PHOTOGRAPH

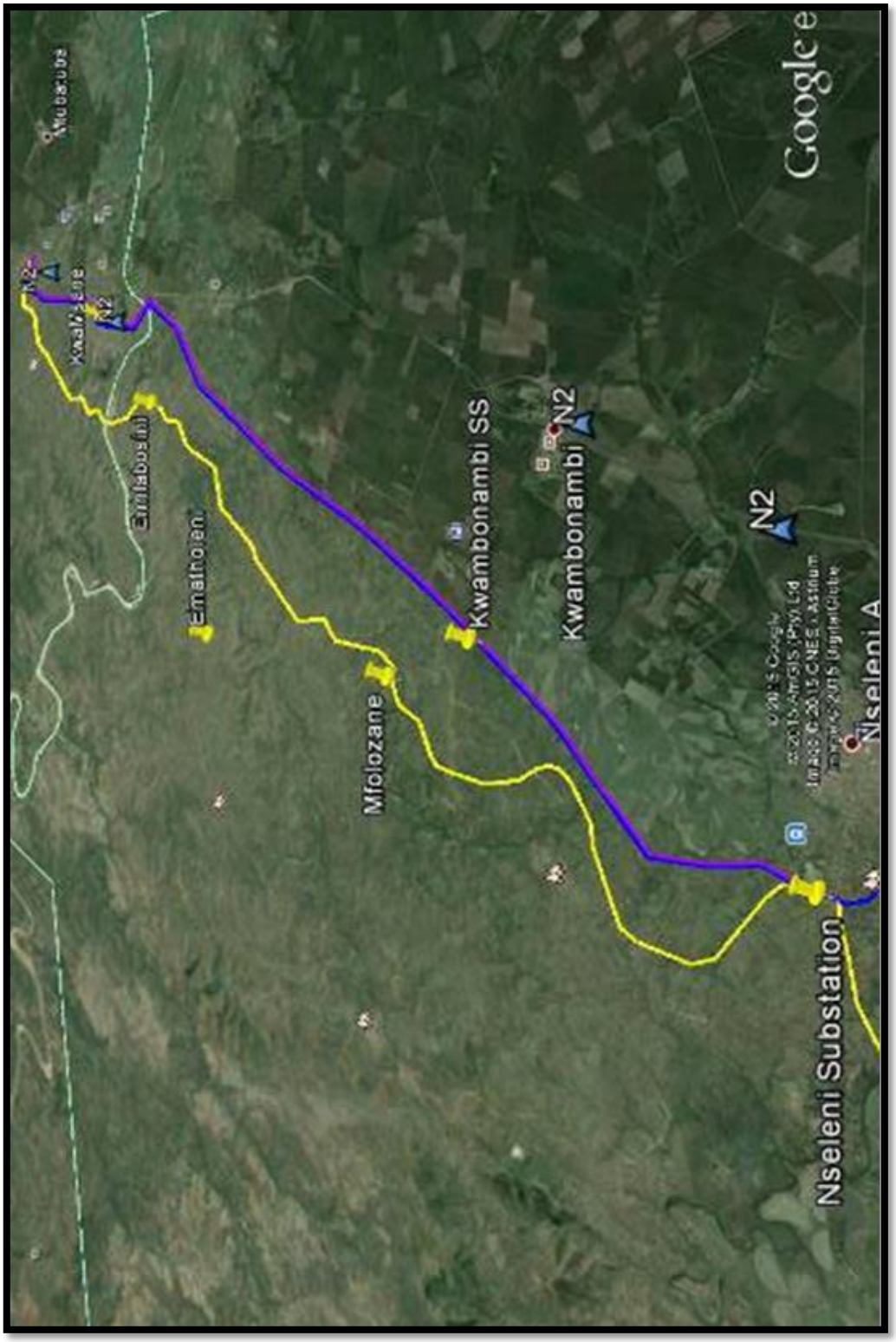

Figure 1. Google aerial photograph showing the location of the preferred route (Corridor 1) near Mtubatuba (Source: Ludloko Developments)

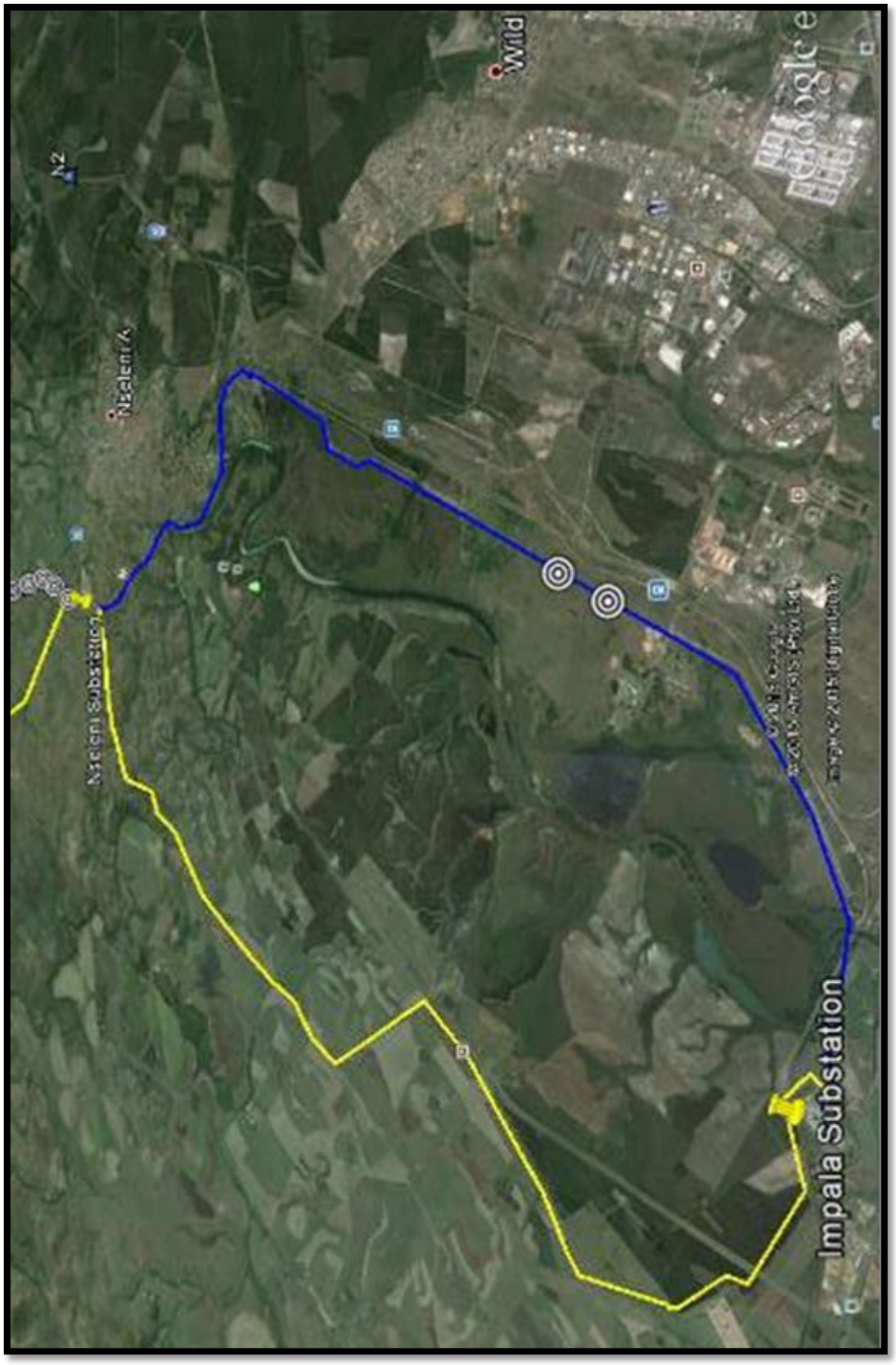

Figure 2. Google aerial photograph showing the location of the alternative route (Corridor 2) near Mtubatuba (Source: Ludloko Developments)

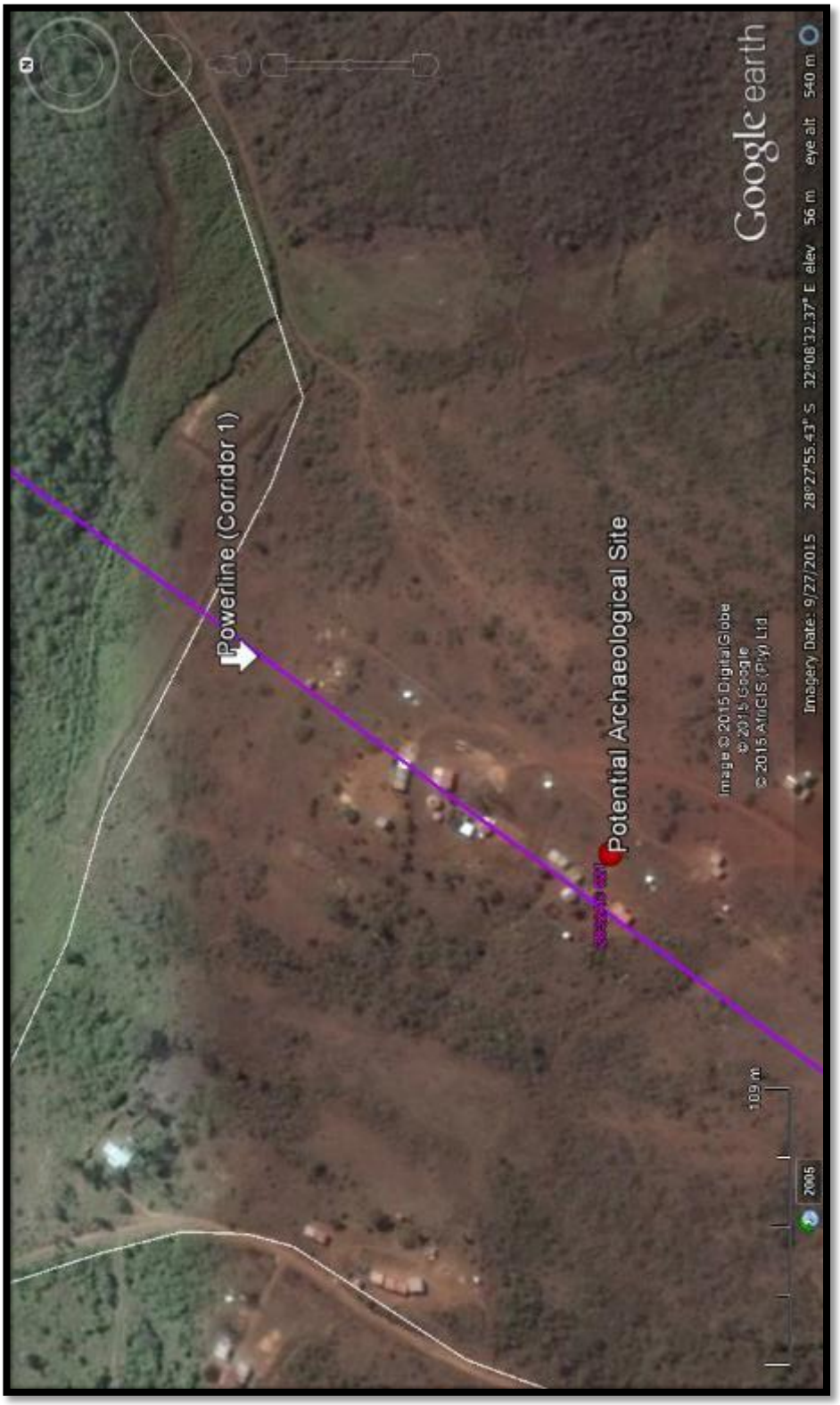

Figure 3. Google aerial photograph showing the location of a potential archaeological site within Corridor 1. However, no archaeological material was observed during a subsequent ground survey of the area.

Figure 4. Commercial plantations occur along large areas of the proposed corridors. No heritage sites are visible in these areas.

Figure 5. Sugar cane plantations adjacent to proposed Corridor 1. No heritage sites were observed in these areas.

Figure 5. Locale of proposed archaeological site.

Figure 6. No archaeological tools or material are visible on the surface today.

8 REFERENCES

Anderson, G. 2001. *Final Archaeological Report for the Greater St Lucia Wetland Park.* Unpublished Report.

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

Feely, J. 1980*. Archaeological survey Mfolozi Park*. Unpublished Report.

Hall, M. 1980. *Field Survey: The Ecology of the Iron Age*. Unpublished report

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.

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

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.*