

CULTURAL HERITAGE IMPACT ASSESSMENT OF THE PROPOSED MTUBATUBA-ST LUCIA 132 & 22KV MULTI-CIRCUIT POWERLINE AND ST LUCIA 132/22KV SUBSTATION



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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 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 cultural heritage survey of the proposed Mtubatuba-St Lucia 132 & 22 kV Multi-Circuit Powerline and St Lucia 132/22kV Substation, KwaZulu-Natal identified no heritage sites in the immediate vicinity of the footprint. 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 and historical sites. 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:	<p>Mtubatuba Network Breaker 6 is a powerline with a capacity of 22kV, supplying power to areas between Mtubatuba and St Lucia (Fig 1). This network is presently operating at its maximum thermal capacity and thus experiences capacity constraints leading to disruptions in supply. In addition, the network has no spare load capacity to provide power and therefore developmental and economic expansion in the region is constrained. With the expected expansion to settlements within the region as well as tourism development within the World Heritage Site Eskom Holdings SOC has identified the need for new power injection in the area. Preliminary technical evaluations have identified alternatives in respect to the positioning of the proposed substation in or around the area known as Dukuduku, as well as the routing to be followed in the establishment of the 132kV and 22kV multi circuit powerline.</p> <p>Eskom is proposing to construct approximately 26 km of a multi-circuit 132kV and 22kV powerline from Mtubatuba 132/88/22 Substation to a proposed new 132/22/11kV St Lucia Sub-station located on the western side of St Lucia Estuary in the vicinity of the Dukuduku settlement. Two underground cables will link the new St Lucia substation to the existing Estuary 22/11kV substation in St Lucia. The information provided in Table 1 has been extracted from Eskom Holdings SOC Limited Empangeni Network Development Plan 2011, and provides a description of the planned activities. Fig</p>

	3 below provides a schematic indication of the nature of the proposed powerlines.
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 study area falls within the Mtubatuba Local Municipality, which borders iSimangaliso, a UNESCO inscribed World Heritage Site (Fig 1). Figure 1 also shows cadastral lines along the study area. The study area comprises of the following:

- a) Land from the town of Mtubatuba southward to the N2 Bridge across the Umfolozi River.
- b) Land to the east of Mtubatuba to the west of St Lucia Estuary. Some of this land falls within the gazetted boundaries of iSimangaliso, a major international tourist destination.
- c) Land to the north-east of Mtubatuba between the Transnet railway line and the R618 (the arterial road between Mtubatuba and St Lucia).

The central section of the study area incorporates Futululu forest, which forms part of iSimangaliso Wetland Park, Zwenelisha Township and Khula Village, located to the south and north of the R618, respectively as well as the Dukuduku settlement, which also lies within iSimangaliso (Fig 2).

Affected environments within the study area comprise of predominantly of sugarcane farms in the south, commercial forest plantations in the north and east of the study area (Fig 7), formal and semi formal urban settlement (Fig 6) as well as transformed and partially transformed forest habitats (Fig 8) at Futululu forest and Dukuduku forest.

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 be 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), Ndongondwane (AD 700-800) and Ntshokane (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 Hluhluwe-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 Mkwanzis, 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 the Dukuduku settlement.

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 and St-Lucia

Municipality: uMkhanyakude District Municipality

4.2 Description of the general area surveyed

The preferred corridors (no's 2,3 and 4)(Fig 2) were intensively surveyed. These corridors follow existing roads and/or previously established powerlines for most of the way (Figs 2 - 7). No heritage sites were noted in a buffer of 50m along the relevant corridors. Modern graves do occur in the informal settlements situated within the Dukuduku Forest but none occur along the identified powerline routes (Fig 6). Although it is highly likely that living heritage sites do occur in association with the Dukuduku informal settlement none are located along the proposed powerline corridors.

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.

5.1 Field Rating

The field rating criteria as formulated by SAHRA (Table1) does not apply to the footprint as no heritage sites or features have been identified on the footprint.

Table 2. 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. However, it should be pointed out that the greater area is relatively rich in archaeological sites and features (Anderson 2001). Construction activities may expose sites and 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 PHOTOGRAPHS

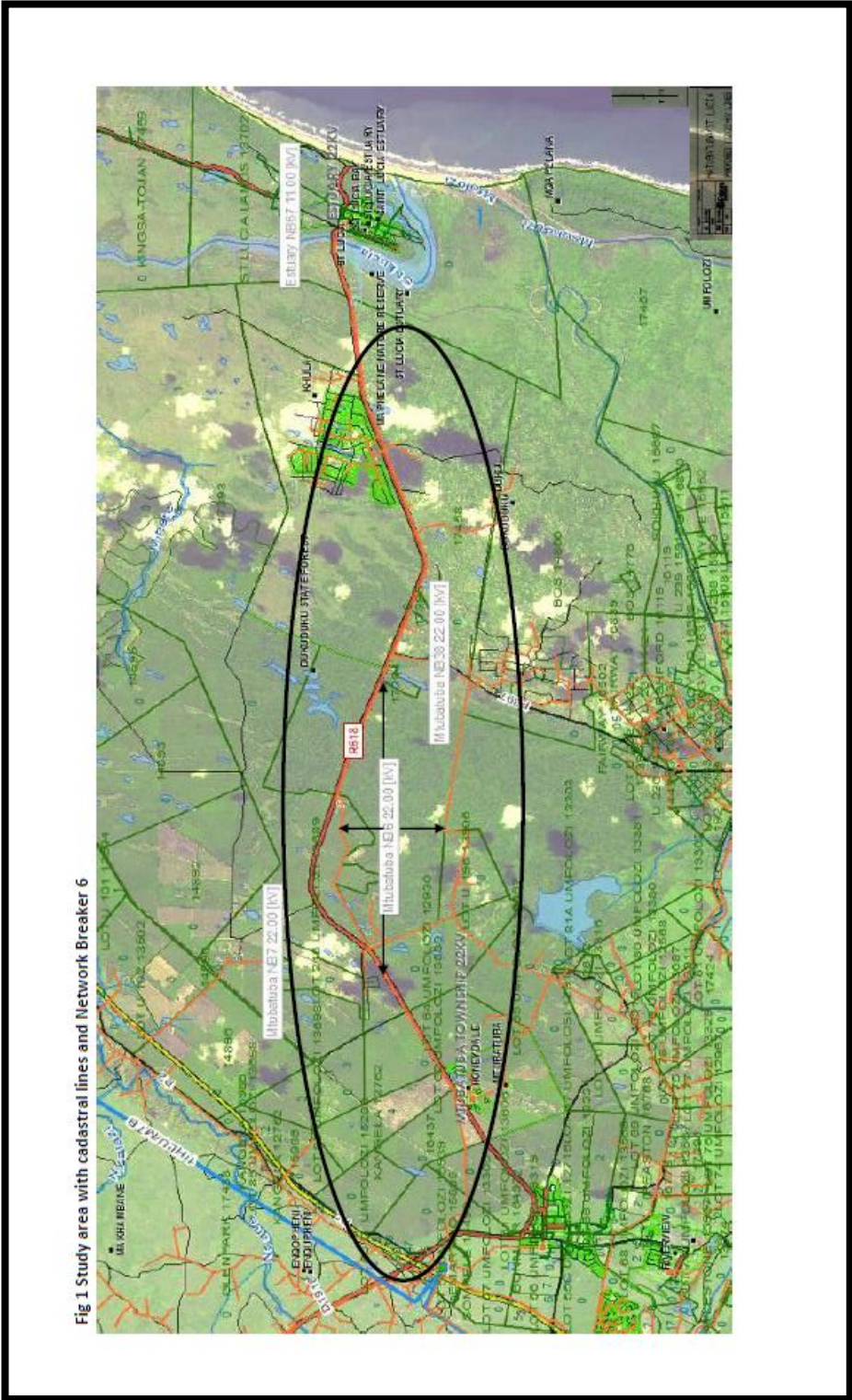
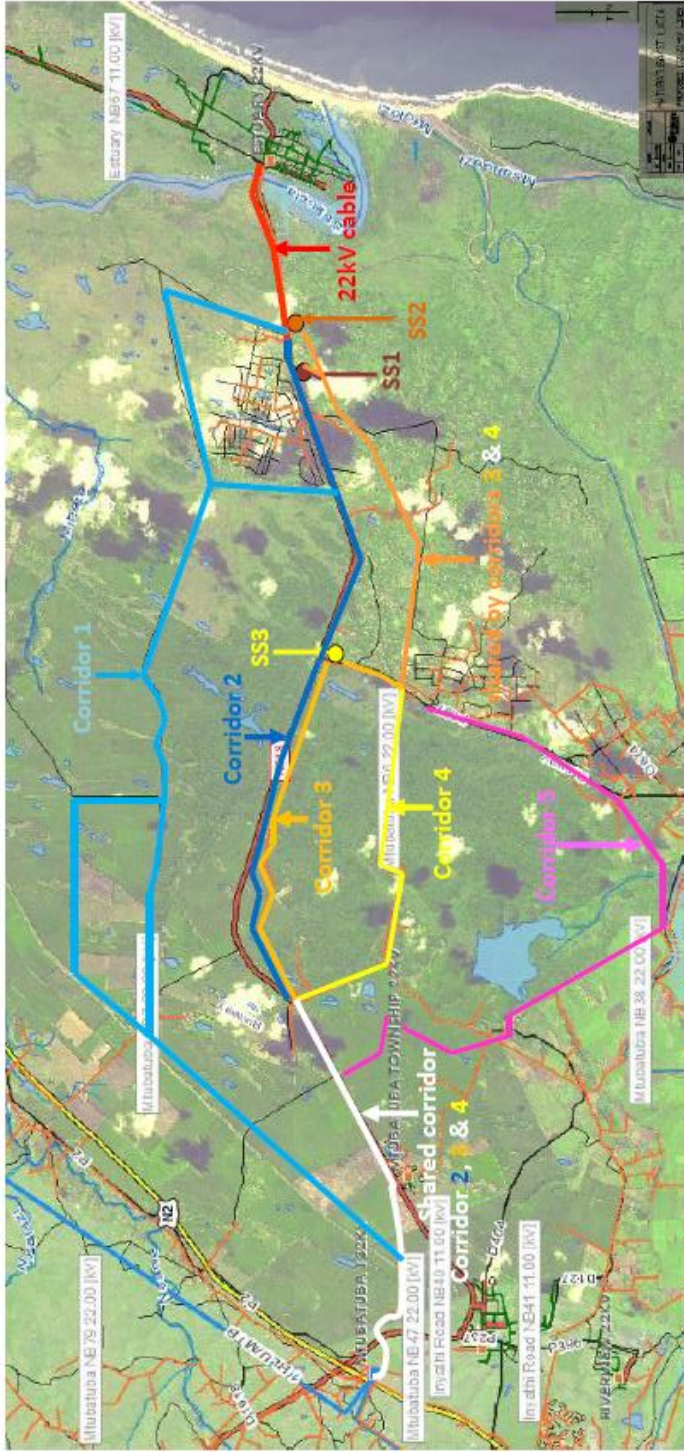


Fig 1 Study area with cadastral lines and Network Breaker 6

stral lines and

Fig 2 Alternative corridors



- White corridor Shared Corridor:** Runs along commercial plantation
- Light blue corridor 1:** Northern corridor (corridor 1). Runs along commercial plantation (Discarded due to commercial forest and line length)
- Dark blue corridor 2:** Middle corridor. Parallel to existing 22kV powerline and R618 (corridor 2) (Visual and Biodiversity Assessment Study)
- Orange corridor 3:** Middle corridor. 100m from R618 and parallel to existing 22kV powerline (corridor 3) (Visual and Biodiversity Assessment Study)
- Yellow corridor 4:** Middle corridor. Runs through Futuluu parallel to existing 22kV powerline (corridor 4) (Visual and Biodiversity Assessment Study)
- Brown corridor:** Middle corridor. Aligned along township spatial plan runs through Dukuduku settlement (extension of corridor 4)
- Pink corridor 5:** Southern corridor. Follows sugarcane farm borders (Discarded due to intricate sugarcane farms and line length)

area.



tion of the proposed powerline



Figure 4. Much of preferred powerline route runs parallel to the existing road network of the area.



Figure 5. Much of the preferred powerline route runs parallel to the existing powerline network of the area.



Figure 6. *Although modern graves are associated with the Dukuduku informal settlement none occur within 100m from the proposed powerline routes in the area.*



Figure 7. *Much of the preferred powerline route is covered by commercial forestry plantations.*



Figure 8. Much of the preferred powerline route covers transformed and partially transformed forest habitats.

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