

**HERITAGE IMPACT ASSESSMENT OF THE
PROPOSED STRUWIG DAM ON PORTIONS 9 & 10
OF 15375 OF THE FARM LANGEBOSKOP, WARD
1, NDWEDWE LOCAL MUNICIPALITY (KZN 293),
ILEMBE DISTRICT MUNICIPALITY**



ACTIVE HERITAGE cc.

For: Enviroedge

**Frans Prins
MA (Archaeology)
P.O. Box 947
Howick
3290**

feprins@gmail.com
activeheritage@gmail.com
Fax: 086 7636380

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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
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 heritage survey of the proposed Struwig Dam near Stanger identified no archaeological and heritage sites on the footprint. The area is also not part of any known cultural landscape. There is no reason why the proposed development may not proceed on the footprint as planned. 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 Enviroedge
Type of development:	<p>The Applicant, namely the Struwig Groep (Pty) Ltd intends to submit an application for environmental authorisation to the Department of Economic Development, Tourism and Environmental Affairs (EDTEA) for the proposed construction of a dam for agricultural purposes on portions 9 and 10 of 15375 of the Farm Langeboskop. The purposed of the proposed dam is to provide water for agricultural irrigation requirements. The proposed irrigation will be for approximately 100 hectares of macadamia plantation. The proposed dam falls within the same footprint of an historical dam, which was destroyed after the 1987 flood event. The existing spill way on the northern dam wall is proposed for upgrading and re-use. The newly proposed Struwig Dam will be earth lined and will comprise a combination of concrete and earthfill dam wall. The proposed dam is described as follows:</p> <ul style="list-style-type: none"> ▣ Water Level (spillway crest) – 349.7m above mean sea level ▣ Surface Area – 2.8 Ha ▣ Approx. Volume - 112 800 m³ ▣ Approx. Dam Wall Height to water level – 11.6m ▣ Approx. Dam Wall Length - 180m
Rezoning or subdivision:	Not applicable
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, 1997 (Act No. 4 of 2008)

1.1. Details of the area surveyed:

The proposed site is located in ward 1 of the Ndwedwe Local Municipality on portions 9 and 10 of 15375 of the Farm Langeboskop. The town of KwaDukuza is located 17 km to the south, and approximately 7km from the R74 main road from Stanger to Kranskop (Fig 1). The site is located within the U50A quaternary catchment, within the Little Nonoti Stream (Figs 2 & 6), a tributary of the Nonoti River. Water will primarily be sourced from the upstream catchment of approximately 17.6 km². The average slope of the catchment is 15.7%. The site is located within an existing sugar cane agricultural farm. A portion of the farm will be transitioned macadamia plantation which is also dependent on a steady supply of water in order to ensure viability. The proposed dam site is located is at 29°13'23.49"S 31°13'42.47"E. The farm is surrounded by open sugar cane plantations and incised drainage valleys vegetated with indigenous forest (Figs 5 & 6). The farm is accessed by existing all weather and gravel roads. It is proposed that the dam wall will comprise material from deposits from the original dam, as well as from commercial sources. Re-shaping and excavation within the dam inundation area will be required

BACKGROUND TO ARCHAEOLOGY AND HISTORY OF AREA

The greater Stanger/KwaDuluza area, has been relatively well surveyed for archaeological heritage sites by the KwaZulu-Natal Museum, post-graduate students from the Universities of Cape Town and the Witwatersrand, and subsequently by private heritage consultants in the last few years.

The available evidence, as captured in the Amafa and 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. Eighty heritage sites occur within this area. These range from Early Stone Age, Middle Stone Age, and Later Stone Age to Early Iron Age, Middle and Later Iron Age sites as well as historical sites relating to the rise of the Zulu Kingdom and the subsequent colonial period. One notable Middle Stone Age site, i.e. Segubudu near Stanger have been excavated in the last two decades by the University of the Witwatersrand and yielded impressive archaeological stratigraphies relating to the period associated with the origins of anatomically modern people (Mitchell 2002). The available data base also

indicates seven archaeological sites in the near vicinity of the project area. These include a midden with Middle Stone Age and later Stone Age material to the immediate south of the study area. Closer to the coast archaeologists have also identified two Early Iron Age sites, and four middens with Later Iron Age material.

Around 1 700 years ago an initial wave of Early Iron Age People settled along the inland foot of the sand dunes 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), Ndongondwane (AD 700-800) and Ntshokane (AD 800-900). Three sites belonging to these periods occur along the banks of the Tugela River to the immediate north of the project area. Some of these, such as the Ndongondwane and Mamba sites have been excavated by archaeologists (Maggs 1989:31; Huffman 2007:325-462). Some Early Iron Age potsherds have been located by archaeologists from the then Natal Museum closer to Maphumulo but these sites have not been thoroughly investigated.

The greater Kwa Dukuza area is also intimately associated with the rise of the Zulu Kingdom of Shaka in the early 1820's. It is at Stanger where King Shaka had his capital Kwa Dukuza and where he was murdered by his half-brothers Dingane and Mhlangane. The exact spot of Shaka's death is thought to be where an old mahogany tree now grows in the grounds of the Stanger/Kwa Dukuza municipal offices. The grain pit where Dingane is thought to have secretly buried Shaka is marked by a large rock in the King Shaka Memorial Garden in the town. The Zulu people erected this memorial during the reign of King Solomon (1913-1932). An interpretative centre has since been added. Also in Stanger near King Shaka's memorial, is a small river known as Shaka's spring. From here, unpolluted water was collected for the king's use. Nearby on the Imbozamo River, was Shaka's Bathing Pool and Shaka's Cave where he would rest after swimming. Not much further off is the famous Execution Cliff where executions were carried out on Shaka's orders (Derwent 2006). The battle of Ndongakusuka, which saw the rise of

power of king Cetshwayo in 1856, took place near the mouth of the Tugela River to the immediate north east of the study area.

The colonial history of the area starts around 1820 when early English ivory traders established themselves at Port Natal (Durban). Dutch descendants (i.e. Voortrekkers) moved into the area soon after 1834 and established a short lived Boer republic called Natalia. However, by 1845 Natal became a British colony. In 1879 Zulu-land was invaded by British forces and the area annexed soon thereafter. Colonial buildings dating from the later 19th century as well as subsequent periods abound in the greater Durban and Stanger areas. These, like the archaeological resources of the province, are also protected by heritage legislation.

The area also played an important role in the more recent struggle-era history of the country. It was at Groutville, a small village to the south of Stanger/Kwa Dukuza that Chief Albert Luthuli, then president of the African National Congress and Nobel Peace Prize Winner, was based for most of his life (Derwent 2006). His home at Groutville has recently been declared a National Heritage Site and developed into a museum that was officially opened on 21 August 2004. The Luthuli Museum includes the original 1927 home of Chief Albert Luthuli that is situated on 3233 Nokukhanya Luthuli Street. A modern interpretive centre that houses temporary exhibits has also been added to the complex. Set in lovely landscaped gardens, the grounds provide the ideal setting in which to absorb the history and achievements of a man who became the first African to receive the Nobel Prize for Peace. Chief Albert Luthuli was a leader ahead of his time whose commitment to non-violence, non-racialism, democracy and human rights has left an enduring legacy.

2 BACKGROUND INFORMATION OF THE SURVEY

2.1 Methodology

A desktop study was conducted of the archaeological databases housed in the KwaZulu-Natal Museum. The SAHRIS website was consulted for previous heritage surveys and heritage site data covering the project area. In addition, the available archaeological and heritage literature covering the greater Kwa Dukuza area was also consulted.

A ground survey, following standard and accepted archaeological procedures, was conducted on 20 June 2017.

2.2 Restrictions encountered during the survey

2.2.1 Visibility

Visibility was good.

2.2.2 Disturbance

No disturbance of any potential heritage features was noted. However, the original Struwig Dam was destroyed by the floods of the 1987 period and only portions of the original dam wall remains (Fig 8). These, however, have little heritage value (see below).

2.3 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.

3 DESCRIPTION OF SITES AND MATERIAL OBSERVED

3.1 Locational data

Province: KwaZulu-Natal

Municipality: Ndwedwe Local Municipality, Ilembe District Municipality

Towns: Stanger/KwaDukuza

3.2 Description of the general area surveyed

The topography of the proposed dam site is highly undulating. The proposed dam wall is situated at 349.7 masl, and the valley is surrounded by rolling sugar cane hills with high points of 408masl to the south, 411masl to the north and 511masl to the west. The dam site is located on the Little Nonoti Stream which confluences with the Nonoti River 450 metres to the east downstream of the proposed dam wall. The proposed dam site

(inundation area) is currently vegetated with indigenous Coastal Belt Vegetation that has rejuvenated from the remains of an older dam floodplain.

The outline of the former dam is indicated by the rejuvenated vegetation and a slight indentation where the initial dam was situated (Figs 3, 4 & 7). Portions of the former dam wall is still visible (Fig 8). Discussions with farm labourers on the property suggests that the older dam was constructed in the 1960's therefore making it younger than 60 years old. The heritage rating of the older dam is also low (Table 2) as similar dams occur widely in KwaZulu-Natal and there are no special heritage features associated with this dam. There are no graves or other heritage features associated with the dam. The area is also not part of any known cultural landscape (Table 3).

4 STATEMENT OF SIGNIFICANCE (HERITAGE VALUE)

4.1 Field Rating

The dam site has a low heritage rating (Table 2). No further recording is necessary before development may take place.

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

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 RECOMMENDATIONS

The proposed Struwig Dam may be constructed from a heritage point of view as no heritage sites are endangered by the proposed development. The old Struwig Dam has no heritage value and the proposed development may alter the imprint of the old dam. It should, however, be pointed out that the KwaZulu-Natal Heritage Act requires that operations exposing archaeological and historical residues, including graves (Appendix 1), should cease immediately pending an evaluation by the heritage authorities.

6 MAPS AND FIGURES

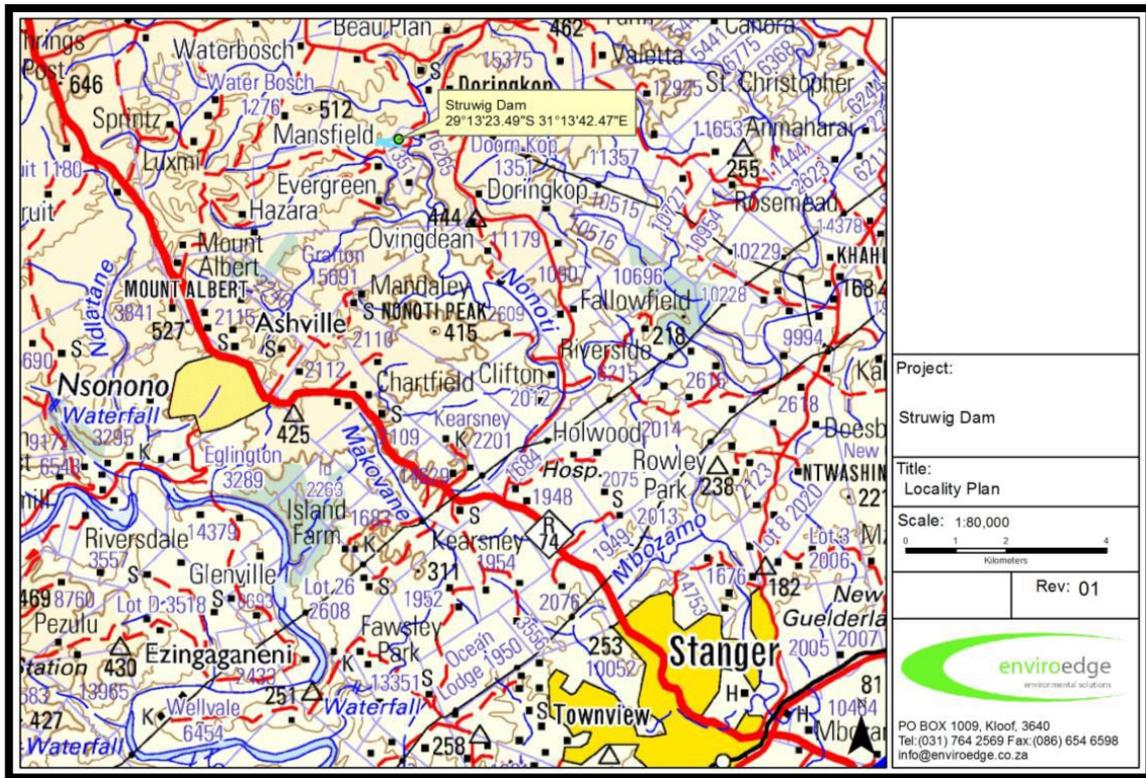


Figure 1. Map showing the location of Struwig Dam relative to Stanger (Source: Enviroedge).

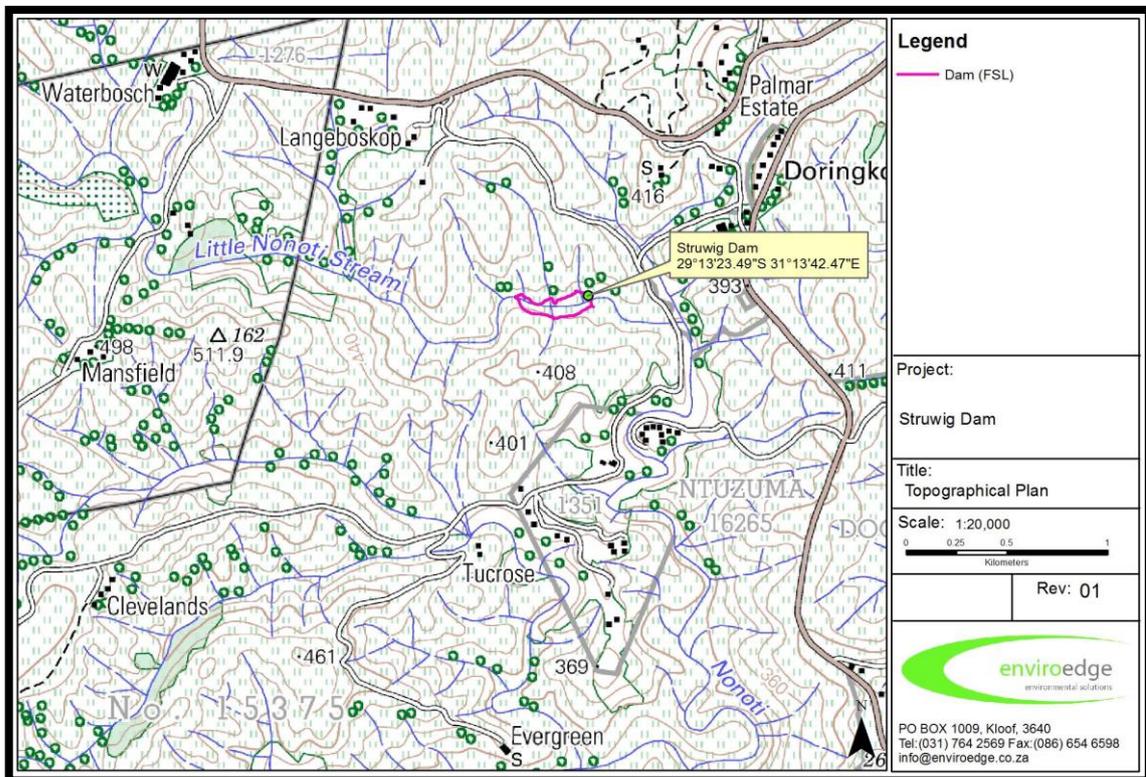


Figure 2. Topographical Map showing the location of the proposed Struwig Dam (Source: Enviroedge)



Figure 3. Historical imagery (1977) showing the presence of the original dam (Source: Enviroedge).



Figure 4. Full supply level and floodplain of the newly proposed Struwig Group Dam (Source: Enviroedge).



Figure 5. The project area is characterised by sugar cane plantations and indigenous forest patches along the stream banks.



Figure 6. The Little Nonoti Stream feeds into the proposed Struwig Group Dam.



Figure 7. Proposed location of the new Struwig Group Dam.



Figure 8. Section of the old dam wall.

7 REFERENCES

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APPENDIX 1

RELOCATION OF GRAVES

Burial grounds and graves are dealt with in Article 36 of the NHR Act, no 25 of 1999. Below follows a broad summary of how to deal with grave in the event of proposed development.

- If the graves are younger than 60 years, an undertaker can be contracted to deal with the exhumation and reburial. This will include public participation, organising cemeteries, coffins, etc. They need permits and have their own requirements that must be adhered to.
- If the graves are older than 60 years old or of undetermined age, an archaeologist must be in attendance to assist with the exhumation and documentation of the graves. This is a requirement by law.

Once it has been decided to relocate particular graves, the following steps should be taken:

- Notices of the intention to relocate the graves need to be put up at the burial site for a period of 60 days. This should contain information where communities and family members can contact the developer/archaeologist/public-relations officer/undertaker. All information pertaining to the identification of the graves needs to be documented for the application of a SAHRA permit. The notices need to be in at least 3 languages, English, and two other languages. This is a requirement by law.
- Notices of the intention needs to be placed in at least two local newspapers and have the same information as the above point. This is a requirement by law.
- Local radio stations can also be used to try contact family members. This is not required by law, but is helpful in trying to contact family members.
- During this time (60 days) a suitable cemetery need to be identified close to the development area or otherwise one specified by the family of the deceased.
- An open day for family members should be arranged after the period of 60 days so that they can gather to discuss the way forward, and to sort out any problems. The developer needs to take the families requirements into account. This is a requirement by law.
- Once the 60 days has passed and all the information from the family members have been received, a permit can be requested from SAHRA. This is a requirement by law.

- Once the permit has been received, the graves may be exhumed and relocated.
- All headstones must be relocated with the graves as well as any items found in the grave

