

DESKTOP HERITAGE ASSESSMENT

**SAPPI SAICCOR FLOOD PROTECTION BERM,
UMKHOMAZI, KWAZULU-NATAL**

September 2020

**For: WSP Environmental (Pty) Ltd
Babalwa Mqokeli**

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APPENDIX 1: DESKTOP PALAEOBOTANICAL STUDY

I, **Jean Lois Beater**, act as an independent specialist for this project and I do not have any vested interest either business, financial, personal or other, in the proposed activity other than remuneration for work performed in terms of the Environmental Impact Assessment Regulations, 2014.

SPECIALIST DETAILS

Name	Qualification	Professional Registration
Jean Beater	MA (Heritage Studies)	Member of Association of South African Professional Archaeologists (No. 349)
	MSc (Environmental Management)	Member of IAIAAsa (No. 1538)

1. INTRODUCTION

Sappi Saiccor Mill is situated in Umkhomazi Drift, approximately 50km south of Durban in KwaZulu-Natal. The Mill manufactures dissolved wood pulp to create a wide range of consumer products, particularly viscose fibre for clothing and textiles (WSP 2020:1)

The Saiccor Mill was established in the 1950's in close proximity to, and within the floodplain of, the uMkhomazi River. Sappi Saiccor proposes to raise a flood protection berm around their site to reduce the risk of the Mill being inundated during an extreme flood event. The existing flood protection measures at the Mill includes a flood berm, comprising a concrete retaining wall and a partially enclosed earth fill berm located along the western and northern boundaries, having a top level of 12m. The proposed development consists of an extension to the flood protection measures by way of raising the existing concrete and earth flood walls as well as extending the existing earth berm. Typically, the structure will have a base width of approximately 14.5m and a crest height of 4m above ground level (WPS 2020:1).

JLB Consulting was appointed by WSP Environmental to undertake a desktop heritage impact assessment for the proposed flood protection berm.

2. LOCATION OF THE SITE

Sappi Saiccor Mill is situated in Umkhomazi Drift, approximately 50km south of Durban in KwaZulu-Natal. It is situated north-east of the small town of Craigieburn and north-west of the N2 highway (see **Figure 1**). A site plan, provided by WSP, indicating the position of the proposed earth berm can be seen in **Figure 2** below.

3. LEGISLATIVE CONTEXT

The length of the proposed flood protection berm is approximately 1, 700 m in length hence it triggers section 41 (1) (a) of the KwaZulu-Natal Amafa and Research Institute Act, 2018 (Act No 5 of 2018) which lists developments or activities that may require an HIA. Section 41 (1)(a) refers to the construction of a road, wall, power line, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length.

However, due to the disturbed nature of the area between the proposed berm and the river, a desktop heritage assessment was deemed to be sufficient for the project.

4. HISTORICAL BACKGROUND OF PROJECT AREA

The uMkhomazi River is the second largest river on the KwaZulu-Natal South Coast and has posed a serious challenge to travel and transport in the region. The first official colonial presence in the Umkomaas area commenced in July 1853 when Henry Francis Fynn was appointed Assistant Resident Magistrate in the Lower Umkomaas division in what was then Durban County. He was also the first to operate a ferry at the drift on the uMkhomazi River. In 1858 Henry Reynolds became the first officially appointed ferryman on the lower uMkhomazi. Reynolds also opened the first accommodation house, as it was called, at the drift where he operated his ferry. After his death in 1862, it traded as the Drift Hotel and was managed by his wife for more than 40 years (du Bois 2015:26).

Frustration with the difficulty in accessing the region beyond the uMkhomazi River resulted in the first public meeting of the new residents held on 24 March 1860. A petition signed by 37 colonists implored the Government to address the issue. But 37 years would pass and many more petitions would be compiled before a bridge was built over the uMkhomazi River (du Bois:27). The bridge is situated approximately 450m west of the proposed berm.

South of the drift lay John MacKenzie's Craigie Burn estate, the earliest sugar plantation to be started south of Isipingo in 1855. The centre of the area lay on the hilltop overlooking the drift from the south where there was a store and a little inn offering accommodation to travellers (Bulpin undated:280). This settlement eventually grew into the small town of Craigieburn.

In 1954, an Italian consortium developed the large Saiccor industrial cellulose plant / mill beside the river, a short distance from the town of Craigieburg as can be seen in **Figure 1** below (Wikipedia 2020:1).



Figure 1: Location of SAPPi Saiccor Mill with proposed berm indicated in yellow

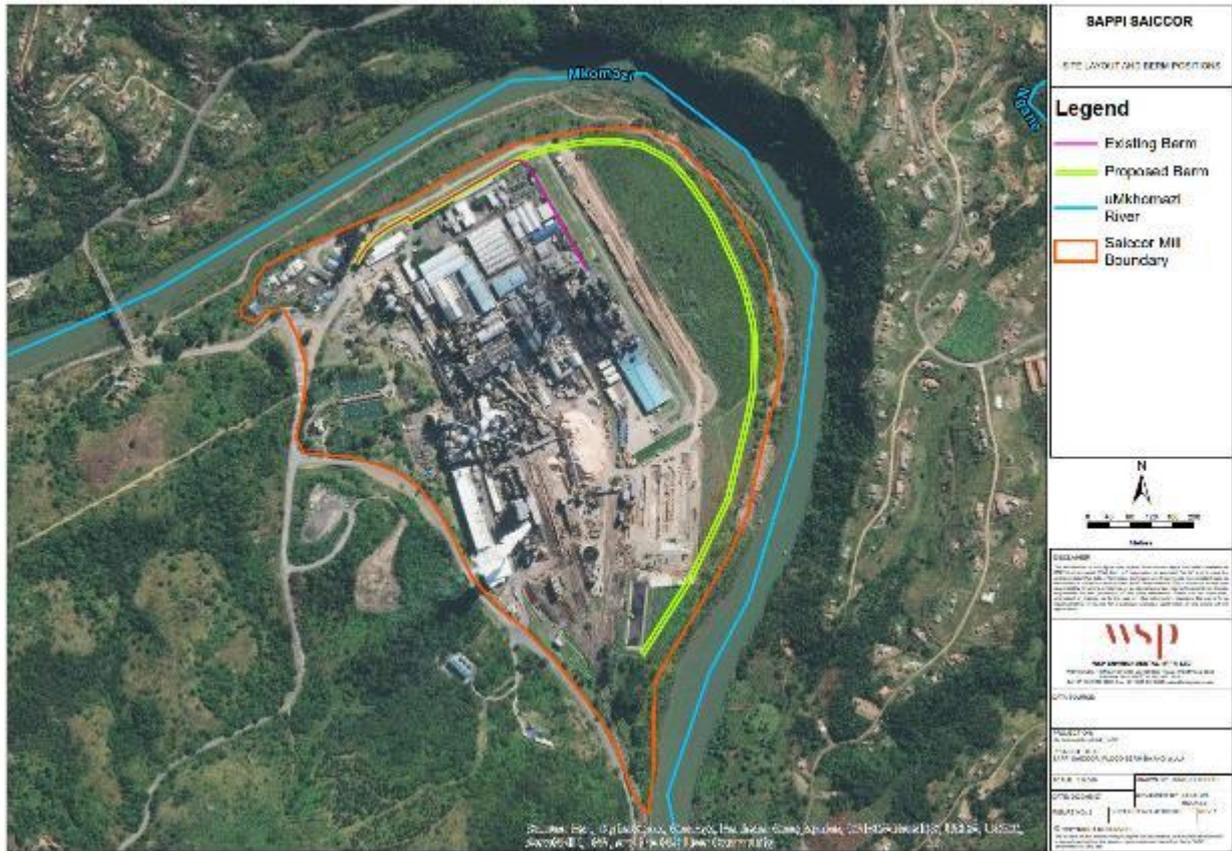
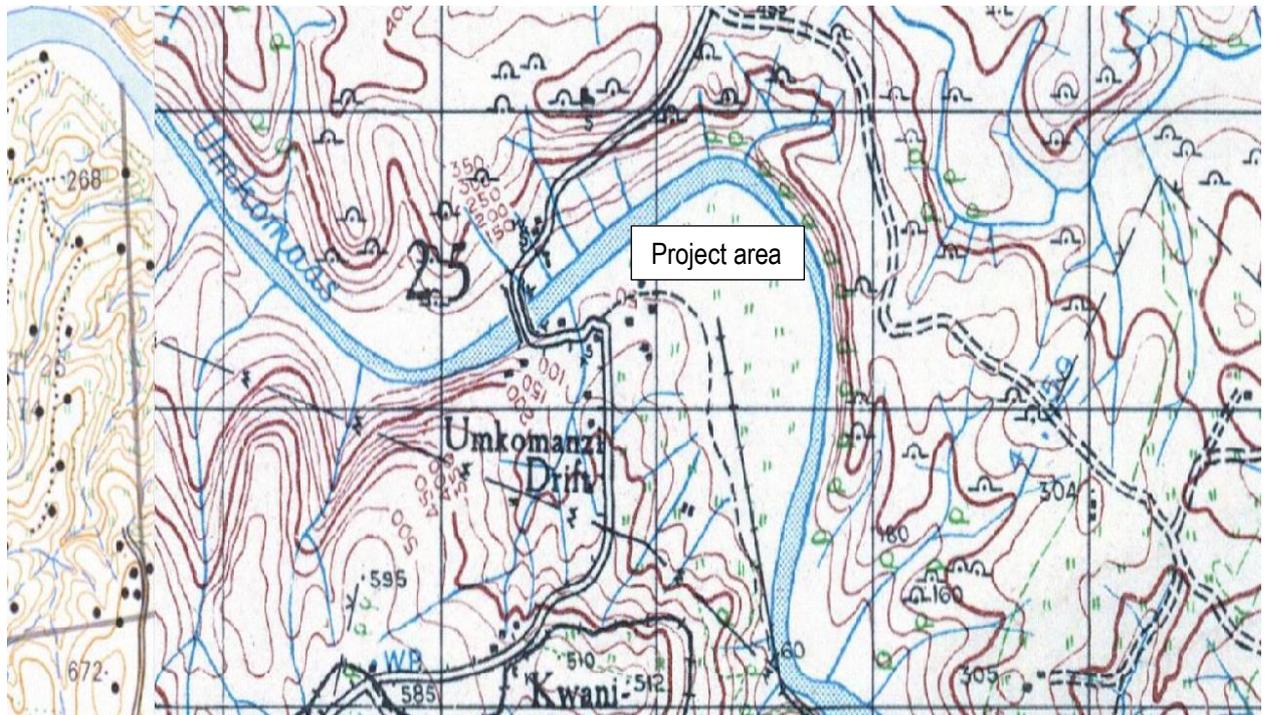


Figure 2: Site plan with proposed earth berm indicated in green (WSP 2020)

5. DESKTOP HERITAGE IMPACT ASSESSMENT

Scrutiny of old maps (see **Figures 3, 4 and 5** below) of the area between the uMkhomazi River and the Saiccor Mill shows that, over the years, the area has been disturbed by farming, as well as the extension of the Mill and, more recently, what appears to be sand quarrying. In addition, a gravel road also crosses the area between the proposed protection berm and river.

A section of an undated topographical map, dated possibly prior to the construction of the Mill, clearly shows farming of the project area.



REFERENCE

VERKLARING

Magnetic Stations and Ground Signs .....	□ ⊞	.....Magnetiese Stasies en Grondtekens
Huts .....	• • •	..... Hutte
Monuments .....	±	..... Monumente
Dipping Tanks .....	× ×	..... Dipbakke
Windmills .....	⊗	..... Windpompe
Walls .....	—	..... Mure
Anti-erosion Walls .....	—	..... Grondbewaringswalle
Excavations .....	—	..... Uitgrawings
Perennial Water .....	—	..... Standhoudende Water
Non-perennial Water .....	—	..... Nie-standhoudende Water
Dry Pans .....	—	..... Droë Panne
Springs, Waterholes and Wells .....	—	..... Fonteine, Watergate en Putte
Marshes, Swamps and Vleis .....	—	..... Moerasse en Vleie
Pipelines .....	—	..... Pyplyne
Photo Centres .....	—	..... Fotomiddelpunte
Prominent Rock Outcrops .....	—	..... Prominente Klipbanke
Terraces .....	—	..... Terrasse
Cultivated Lands .....	—	..... Bewerkte Lande
Orchards and Vineyards .....	—	..... Boorde en Wingerde
Trees and Bush .....	—	..... Bome en Bos

Figure 3: Old map of project area prior to the development of the mill

Aerial images below (Figure 4 and 5) of the project site from the 1970s and 1980s show continued farming of the area east and south-east of the Mill with what appears to be sugar cane. The 2005 Google Earth image of the project area also shows farming of the area. The continuous use of the area for farming purpose would have resulted in the destruction of any heritage resources in

the area (if any). There is also evidence of some disturbance of the northern area between the Mill and river.

Figures 6 and 7 below show the extension of the Mill eastwards (2011) as well as showing a road running alongside the river. As noted earlier in Chapter 1 of this report, existing flood protection measures on the Mill's western and northern boundaries have also led to disturbance of the area. The 2018 Google Earth image shows possible sand quarrying along the banks of the uMkhomazi River leading to even more disturbance of the area.



Figure 4: Farming of area between mill and river (1974)



Figure 5: Aerial image showing farming (1983)



Figure 6: Google earth image (2011)



Figure 7: Google earth image (2018) showing sand quarrying activities and road

Photographs of the project area taken in September 2020 by WSP confirm the current disturbance of the area between the river and the Mill.



Figure 8: Looking towards mill across cleared area



Figure 9: Area between mill and river overgrown with invasive plants



Figure 10: Disturbed area



Figure 11: Existing disturbance

The South African fossil sensitivity map shows that area where the berm is proposed falls into an area of moderate fossil sensitivity. A desktop palaeontological study was undertaken (see **Appendix 1** appended to this report) which found that the proposed site lies on the Dwyka Group (Karoo Supergroup) tillites, diamictites and shales and also on Quaternary alluvium. The study found that there is a very small chance that fossils of the *Glossopteris* flora may occur in mudstones of the Dwyka Group, therefore a Fossil Chance Find Protocol (included in **Appendix 1**) should be added to the Environmental Management Programme (EMPr) compiled for the construction of the proposed berm. Based on this information it was recommended that no palaeontological site visit was required unless fossils are found once excavations have commenced.

Due to the disturbed and transformed nature of the area where the proposed flood protection berm is to be constructed, it is highly unlikely that intact heritage resources will be found on the site. Continual use of the area over many years has resulted in a highly disturbed environment. Therefore, it is recommended that from a heritage perspective the construction of the flood protection berm may proceed as long as the mitigation measures provided below as well as those in the desktop palaeontological report are applied where necessary.

6. MITIGATION MEASURES

- For any chance heritage finds, all work must cease in the area affected and the Contractor must immediately inform the Project Manager. The provincial heritage agency, the KwaZulu-Natal Amafa and Research Institute (hereafter referred to as the Institute) must also be informed.
- A heritage specialist must be called to site to assess the significance of the find.
- Permits must be obtained from the Institute if heritage resources are to be removed, destroyed or altered.
- Only once the heritage specialist gives the go-ahead can work in the area of the find recommence
- Under no circumstances may heritage material be destroyed or removed from site unless under direction of a heritage specialist.
- Should recent remains be found on site that could potentially be human remains, then the South African Police Service (SAPS) should also be contacted. No SAPS official may remove remains until the correct permit/s have been obtained.
- The Fossil Chance Find Protocol, as provided in the desktop palaeontological report, must be included in the EMPr.

7. REFERENCES

Bulpin, T.V. Undated. *To the shores of Natal*. Citadel Press: Cape Town

Du Bois, D. 2015. A sketch of colonial Umkomaas in *Natalia* 45 (2015).
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APPENDIX 1

DESKTOP PALAEOLOGICAL STUDY