PROPOSED MARITIME SCHOOL OF EXCELLENCE, ETHEKWINI METROPOLITAN MUNICIPALITY, KWAZULU-NATAL

Desktop Heritage Assessment

23 March 2021

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APPENDIX 1: Desktop Palaeontological Assessment

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 | Qualifications | Professional Registration |
|-------------|--------------------------------|--------------------------------|
| Jean Beater | MA (Heritage Studies) | Member of Association of South |
| | | African Professional |
| | | Archaeologists (No. 349) |
| | MSc (Environmental Management) | Member of IAIAsa (No. 1538) |

1. INTRODUCTION

The Directorate: Infrastructure Planning of the Department of Education of the Province of KwaZulu-Natal wishes to construct a Maritime School of Excellence to be situated on the corner of Somtseu Road and Sylvester Ntuli Road, Durban. The proposed site is currently used as a sports field for the George Campbell School of Technology.

The desktop heritage assessment was undertaken in order to determine whether the construction of the proposed school would impact on heritage resources.

2. LEGISLATIVE BACKGROUND

The buildings and pavement space planned is in the region of 12500m² which excludes the gardens and open spaces in between the buildings. The total size is approximately 2.4 ha. The development therefore triggers section section 41 (1) (c)(i) of the KwaZulu-Natal Amafa and Research Institute Act, 2018 (Act No 5 of 2018) which lists developments or activities that require an HIA. The relevant sub-section refers to: "any development or other activity which will change the character of a site- (i) exceeding 5000 m²".

The development may also impact protected structures, historic fortifications, archaeological and palaeontological resources that are protected in terms of sections 37 and 40 of the KwaZulu-Natal Amafa and Research Institute Act, 2018.

In terms of Section 3 of the NHRA, heritage resources are described as follows:

- (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 paleontological 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).

3. LOCATION

The Maritime School of Excellence is to be situated on the corner of Somtseu Road and Sylvester Ntuli Road in Durban. On its eastern boundary is the Olive Convention Centre and the Durban ice skating rink and on its western boundary the SMG Durban – BMW dealership and Land Rover, Durban dealership. On its southern and northern boundaries are existing sports fields (see **Figure 1** below).



Figure 1: Aerial map showing project site

4. TERMS OF REFERENCE

Undertake a desktop heritage assessment (that included a site inspection) in order to determine the possible existence of heritage resources, as listed above, that could be impacted by the construction of the school. Provide mitigation measures to limit or avoid the impact of the proposed development on heritage resources (if any).

Submit the desktop heritage report to the provincial heritage resources authority, the KwaZulu-Natal Amafa and Research Institute (hereafter referred to as the Institute), for their assessment and comment.

5. METHODOLOGY AND SITE CONDITIONS

A survey of literature, including previous HIAs done in the surrounding in area, as well as scrutiny of historical maps was undertaken in order to gain an understanding of potential heritage resources in the immediate and surrounding area of the proposed school.

A site inspection was undertaken on 17 March 2021. Site conditions were good apart from a thick grass layer.

6. HISTORICAL BACKGROUND

The Stone Age gave rise to the first occupation of KwaZulu-Natal and South Africa in general. Among other sites within the province that document the Stone Age archaeology is Sibudu Cave on the coast of KwaZulu-Natal. The cave contains evidence for early forms of cognitive human behavioural patterns in the Middle Stone Age of South Africa some 40 000 years BP (NGT Projects 2013:24).

The second phase of occupation of KwaZulu-Natal is known as the Iron Age archaeology. The Iron Age of southern Africa dates to the first millennium AD. The site of Mzonjani, located some 15 km north of Durban is the oldest known Iron Age site in KwaZulu-Natal dating to the third millennium AD. By 1050 AD the Natal region is known to have been occupied by the Zulu people. The defining archaeological traits of the Iron Age people in this region and other parts of southern Africa is represented through distinct ceramic traditions, stone walls and other structural features

such as grain bins and hut floor remains, kraals and often vitrified cattle dung. (NGT Projects 2013:24-25).

The third phase of occupation was the Late Iron Age – a period just before the contact with the colonial settlers. In KwaZulu-Natal and other parts of southern Africa this period was characterised by a variety of expansionists' battles fought by different chiefdom, culminating to the pre-colonial southern African war called Imfecane. In KwaZulu-Natal, the Imfecane brought about many battles between and within the different local Zulu chiefdoms. The fourth period of occupation of the KwaZulu-Natal came about with the settlement of KwaZulu-Natal by the colonial settlers (NGT Projects:26-27).

According to Derwent (2006:27 - 33), the first reliable written record of Durban dates back to 1497 when Portuguese explorer, Vasco de Gama sighted land on Christmas Day and named it Terra de Natalia. In the years that followed, the area has been variously called eThekwini, Ponta de Pescario, Rio de Natal and Port Natal, before it became known as Durban Bay. Merchants and sailors used the lagoon as a stopover for supplies for nearly 350 years before the first European settlers began to arrive in the 1820s when the likes of Francis George Farewell, Henry Francis Fynn and James King sought to open trade with the Zulu kingdom. In 1824, Farewell and Fynn set up a trading camp on what became Market Square, part of which is now known as Farewell Square. As the town grew, buildings were put around Market Square, of which the oldest surviving structure is the courthouse on Aliwal Street. It was open in 1863 and today serves as the Local History Museum.

7. DESKTOP HERITAGE IMPACT ASSESSMENT

Figure 2 below shows the project site and surrounds which was clipped from the 1937 aerial photographic image obtained from the Department of Rural Development and Land Reform's CDNGI Geospatial Portal (www.cdngiportal.co.za) (reference 117B_053_36580) It should be noted that all historical maps referred to in this report were obtained from this website.

The image below shows a small structure and an open field located either on or west of the project site. No other structures are found in close proximity to the proposed school site. **Figure 3** is a closer view of the project site.



Figure 2: Aerial image of project site outlined in yellow and surrounding area



Figure 3: Closer view of 1937 aerial image

The 1940 topographic map of the project site (2930DD_2931CC_ED1) indicates a single structure (see **Figure 4**) either on the project site or west of the project site. However, by 1967 this structure is no longer visible as can been seen on the aerial image in **Figure 5**.

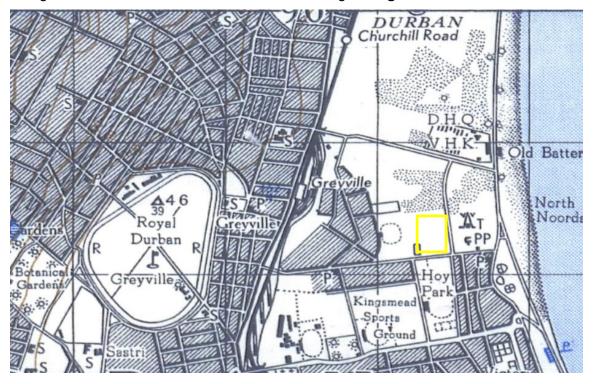


Figure 4: 1940 topographic map of project site



Figure 5: 1967 aerial image of project area

During the site inspection no heritage structures or other heritage sites were found. The goal posts and the flood lights for the sports field are still on the site as can be seen in **Figure 6**.



Figure 6: Goal posts and flood lights on the site

In the south-eastern corner of the site is the Brickhill Road pump station as well as a precast walled area where equipment is kept as well as grass cuttings and leaves (see **Figure 7** below). In the north-eastern corner of the site is an informal dwelling made from pre-cast walling (**Figure 8**). It may be occupied as there is a sewage smell in the immediate area.



Figure 7: Pre-cast walled area

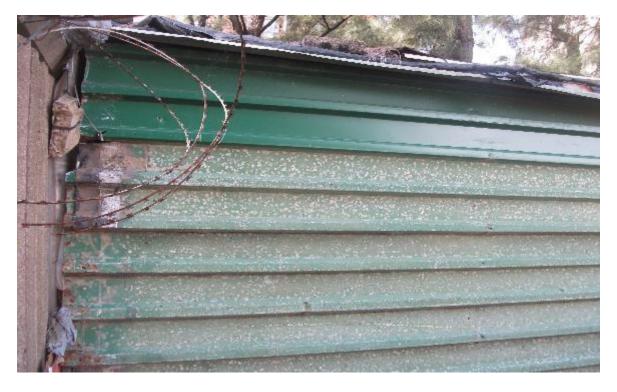


Figure 8: Informal structure



Figure 9: Looking north towards George Campbell School of Technology



Figure 10: Looking east towards Durban ice skating rink and the ocean



Figure 11: Looking in a southerly direction

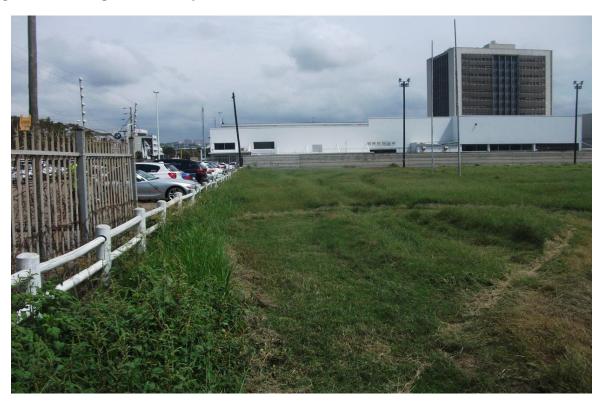


Figure 12: Looking west towards BMW dealership and parking lot

The fossil sensitivity map of South Africa indicates that the project site falls within a moderate fossil sensitivity zone as indicated by the green colour in **Figure 13** below. A moderate sensitivity area requires a desktop palaeontological assessment.

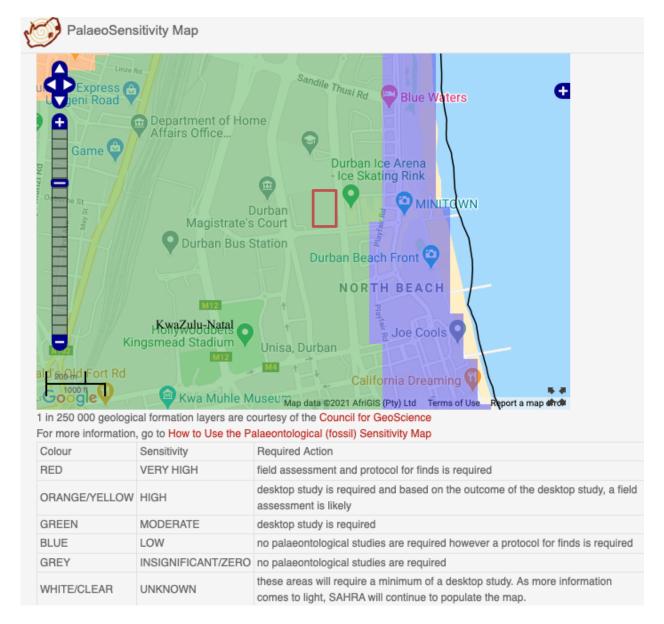


Figure 13: Fossil sensitivity of project site indicated with red outline

The desktop palaenotological study, undertaken by Banzai Environmental (report attached as Appendix 1 to this report), established that the proposed development footprint is underlain by Berea-type clayey sands of the Umkwelane Formation (Uloa Subgroup, Maputaland Group). Botha (2018) did not record fossils from this horizon although Groenewald (2012) mentioned fossilized oyster shells, but no reference was provided. There is thus a small chance that oysters, and other shells may be present within the Umkwelane Formation. However, if fossil remains are discovered during any phase of construction, either on the surface or exposed by excavations the Chance Find Protocol must be implemented by the Environmental Control Officer (ECO) in charge of these developments. The study therefore recommended that no further palaeontological heritage studies, ground truthing and/or specialist mitigation would be required unless there was the discovery of newly discovered fossils (Banzai Environmental 2021: vii).

8. RECOMMENDATIONS AND CONCLUSION

During the site inspection, no heritage resources were found. A desktop assessment of historical aerial photographs (1937, 1967 and 1989) and the 1940 1:50 000 topographical map show that the project site has remained largely undeveloped since the 1930s. The pump station, precast wall and structure in the north-east corner of the site all appear to be recent structures and can be demolished if necessary.

The construction of the proposed Maritime School of Excellence may proceed once the desktop palaeontological assessment has been undertaken and the recommended mitigation measures provided in this report and the desktop palaeontological report are implemented.

9. MITIGATION MEASURES

- For any chance finds of heritage resources, all work must cease in the area affected and the Contractor must immediately inform the Project Manager. A heritage specialist must be called to site to inspect the find. The Institute must also be informed about any finds.
- The heritage specialist will assess the significance of the heritage resource/s found and provide guidance on the way forward.
- Permits must be obtained from the Institute if heritage resources are to be removed, destroyed or altered.
- Any mitigation measures recommended by the desktop palaeontological assessment must be adhered to.
- Any heritage resources found close to the construction site must be protected by a 5m buffer in which no construction can take place. The buffer material (danger tape, fencing, etc.) must be highly visible to construction crews.
- Under no circumstances may any heritage material be destroyed or removed from site unless under direction of a heritage specialist.
- Should any remains be found on site that is potentially human remains, the South African Police Service (SAPS) should also be contacted. Members of the SAPS may not remove remains until the necessary permits have been obtained.
- The procedures outlined in the Chance Find Protocol included in the desktop palaeontological study must be implemented if fossil finds are made during the construction of the school.

10. REFERENCES

Department of Rural Development and Land Reform's CDNGI Geospatial Portal (www.cdngiportal.co.za)

Derwent, S. 2006. *KwaZulu-Natal Heritage Sites. A guide to some great places*. Claremont: David Philip Publishers

NGT Projects & Heritage Consultants. 2013. A Heritage Impact Assessment Study for the proposed PRASA's modern maintenance depot upgrade, Durban Yard PRASA Depot, eThekwini Municipality, KwaZulu-Natal, South Africa