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17 August 2018

Attention Bernadet Pawandiwa

Dear Ms Pawandiwa

Application for Exemption from HIA

**Proposed Construction of the North West Channel (Transnet Land) Bulk Storm water Infrastructure and discharge thereof from the Aquadene Housing Development, Richards Bay
uMhlatuze LM, King Cetshwayo DM, KwaZulu-Natal**

Project Area and Project description¹

GIBB (Pty) Ltd was appointed by the uMhlatuze Municipality to undertake a basic assessment report (BAR) as part of the Environmental Impact Assessment Process required for authorisation of the construction of storm water run-off infrastructure from the Aquadene Phase 2 residential development.

The City of uMhlatuze proposes an extension to the existing Aquadene suburb to provide affordable government housing. The Aquadene Phase 2 Development will make a significant contribution to alleviating the current low to middle income housing backlog experienced within the boundaries of the Municipality. The Environmental Impact Assessment (EIA) approval for internal services and top structures was obtained in 2015, and did not include bulk services in the scope.

Since then, the bulk storm water infrastructure designs have been completed. This project therefore entails environmental services for the bulk storm water services for storm water run-off from the Aquadene Phase 2 Development. The proposed project consists of a bulk storm water and discharge system, namely:
Aquadene Phase 2 Development: Bulk Storm water Outfall Drainage Channel (1,830m in length). This will consist of the following features: a duel pipe section (2x 1200 dia) and a lined channel section. The piped outfall will collect run-off from the Aquadene Phase 2 development from two discharge points.

The piped section will be located along the R619 and will continue until daylighting. From this point a trapezoidal channel will continue from the pipe outlet towards the natural drainage path and discharge into the stream upstream of the railway culvert. The total length of infrastructure is approximately 1,250m for piped and 580m for channel

¹ Information provided by Client, GIBB (Pty) Ltd. GIBB were appointed by the uMhathuze Municipality to conduct a Basic Assessment of the site in compliance with NEMA requirements and the city's environmental by-laws.

Observations

Prior to late 19th and early 20th C colonial settlement the study area would have comprised a mosaic of Maputaland wooded grasslands; hygrophilous grasslands associated with drainage lines and seasonal pans; and riparian and swamp forest elements located along and within drainage lines ². The current Aquadene suburb, and the proposed Phase II extensions, however, occur on severely transformed land previously and currently planted to commercial eucalyptus plantations (Figure 3 and 4). Episodic de-stumping of these plantations prior to replanting has been observed by the author since 1982.

The study area lies within the realm of the historical extent of the Mbonambi/Mthetwa and Tembe/Tsonga polities (17th to 20th C) and earlier Late Iron Age Nguni settlement (15th-17th C). Archaeological residues, in particular ceramics, marking these periods of settlement; and oral history research in the wider Richards Bay area; attest to a long interaction by earlier African farming communities across this landscape ^{3,4,5}.



Figure 3 Current afforestation within the Study Area

² Mucina and Rutherford (2012). National Vegetation Types. SANBI. Pretoria.

³ van Schalkwyk, LO.1997. Mining Yields up Ancient Past. **Titania**. Richards Bay Minerals.

⁴ van Schalkwyk, LO and Ngubane, M. 1994. Tracking down old miners and beachcombers - Brown mussels and iron-working long, long ago. **Titania**. Richards Bay Minerals.

⁵ Anderson, G. and Anderson, L. 2016: The Archaeological Surveys and Excavations of the Zulti North Mining Lease. Report for Richards Bay Minerals. Natal Museum Site Record Database.



Figure 4 Typical hygrophilous grasslands within the drainage line within which the storm water channel will discharge

However, the fundamental transformation to the local landscape by afforestation, particularly the practice of episodic de-stumping, would have caused any archaeological residues present to be moved out of their primary context; rendering them, even if observed, to be of little further scientific value. This has been attested to in other recent heritage studies in the immediate Richards Bay area ^{6,7,8,9,10}.

The discharge pipeline is aligned within the road reserve of the R619, an area of extensive disturbance. The outfall channel is further aligned into an extant natural drainage line of the Nseleni River. Seasonally inundated drainage lines would have been eschewed for habitation in the historical past. Consequently, no graves should be expected in the immediate precinct of the planned storm water infrastructural services proposed.

The underlying base lithology comprises Quaternary alluvia and calcretes, overlain by deep Late Pleistocene aeolian dune sands. This lithology is considered to be of low sensitivity (blue) in terms of its palaeontology (Groenewald 2012)¹¹ and therefore no further palaeontological mitigation is required.

Recommendations

Accordingly, we request that Amafa allow the proposed infrastructural upgrades to proceed with no further heritage resource mitigation suffice that the protocols in Appendix 1 are made binding to any Environmental Authorisations issued.

Please can you notify us timeously, via the loaded SAHRIS Case File, as to the decision of Amafa in this regard.

⁶ HIA Phase 1 Richards Bay Industrial Development Zone (IDZ). Prins, F. 2015.

⁷ HIA Mandlazini Agri-Village Sewer Network Installation. Van Jaarsveld, A. 2013 SAHRIS Case 2961.

⁸ Nkoninga Pump Station and Rising Main Upgrade, Richards Bay. Van Schalkwyk, LO. 2016. SAHRIS Case 10105.

⁹ RBIDZ. HIA Exemption Application. van Schalkwyk, LO. 2014. SAHRIS Case 6756

¹⁰ Heritage Survey of the Proposed Aquadene Housing Project. Richards Bay, Kwa-Zulu Natal. Anderson, G. 2013. SAHRIS Case 4008.

¹¹ Groenewald, G. 2012. Unpublished Palaeontological Technical Report for KwaZulu-Natal.

Yours sincerely



Len van Schalkwyk
Principle Investigator.

Appendix 1

Protocol for the Identification, Protection and Recovery of Heritage Resources During Construction and Operation

It is possible that sub-surface heritage resources could be encountered during the construction phase of this project. The Environmental Control Officer and all other persons responsible for site management and excavation should be aware that indicators of sub-surface sites could include:

- Ash deposits (unnaturally grey appearance of soil compared to the surrounding substrate);
- Bone concentrations, either animal or human;
- Ceramic fragments, including potsherds;
- Stone concentrations that appear to be formally arranged (may indicate the presence of an underlying burial, or represent building/structural remains); and
- Fossilised remains of fauna and flora, including trees.

In the event that such indicator(s) of heritage resources are identified, the following actions should be taken immediately:

- All construction within a radius of at least 20m of the indicator should cease. This distance should be increased at the discretion of supervisory staff if heavy machinery or explosives could cause further disturbance to the suspected heritage resource.
- This area must be marked using clearly visible means, such as barrier tape, and all personnel should be informed that it is a no-go area.
- A guard should be appointed to enforce this no-go area if there is any possibility that it could be violated, whether intentionally or inadvertently, by construction staff or members of the public.
- No measures should be taken to cover up the suspected heritage resource with soil, or to collect any remains such as bone or stone.
- If a heritage practitioner has been appointed to monitor the project, s/he should be contacted and a site inspection arranged as soon as possible.
- If no heritage practitioner has been appointed to monitor the project, the head of archaeology at Amafa's Pietermaritzburg office should be contacted; telephone 033 3946 543.
- The South African Police Services should be notified by an Amafa staff member or an independent heritage practitioner if human remains are identified. No SAPS official may disturb or exhume such remains, whether of recent origin or not.
- All parties concerned should respect the potentially sensitive and confidential nature of the heritage resources, particularly human remains, and refrain from making public statements until a mutually agreed time.
- Any extension of the project beyond its current footprint involving vegetation and/or earth clearance should be subject to prior assessment by a qualified heritage practitioner, taking into account all information gathered during the initial assessment.