eTHEMBENI CULTURAL HERITAGE

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Attention Bernadet Pawandiwa

Dear Ms Pawandiwa

Application for Exemption from a Phase 1 Heritage Impact Assessment
Proposed Umgeni Water Desalination Plant and associated infrastructure at Lovu
eThekweni Municipality, KwaZulu-Natal

Project description

Umgeni Water Amanzi (Umgeni Water) is proposing to construct and operate a seawater desalination plant on the Lovu River near Kingsburgh/Mid-Illovo on the KwaZulu-Natal South Coast, using seawater reverse osmosis technology. The plant facility will have a lifespan of approximately 25 years with the potential of a lifespan extension. Most of the infrastructure will be constructed in one phase with additional plant modules being provided at about five year intervals to match the growth in water demand. The combined footprint of the desalination plant will occupy an area of ±70 000 m² (7ha).

Linear Infrastructure includes –

- Seawater intake (source water) system with screening and sea-bed pipelines to the desalination plant location;
- Brine outfalls constructed in the sea and discharge sea-bed pipelines;
- Terrestrial pipelines transporting brine/permeate between the sea, the desalination plant existing bulk water infrastructure; and
- Electrical power line and transformer yard infrastructure.

Site location

See attached site location diagrams in SAHRIS case file.

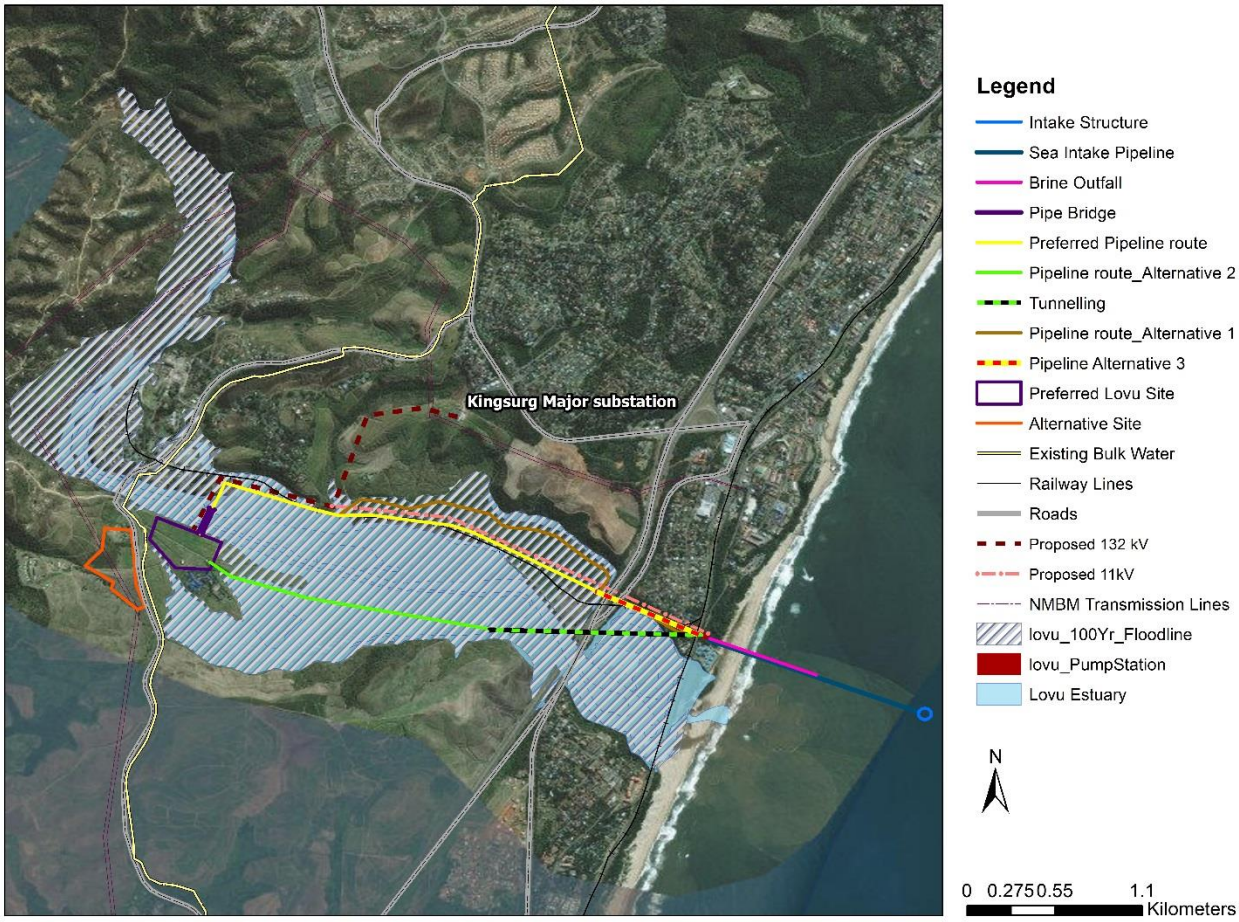

FIGURE 1 GOOGLE EARTH IMAGERY INDICATING PROJECT LOCATION.

Site assessment and recommendations

eThembeni staff inspected the site on 23 February and 22 July 2015

In terms of the National Heritage Resources Act, a Heritage Impact Assessment is required in terms of Section 38(1c): *Any development or other activity which will change the character of a site (i) exceeding 5 000m^2 in extent.*

The proposed Lovu River site is of low sensitivity from all aspects of archaeological heritage. The plant location within the lower river basin precludes the presence of archaeological sites as in the past people would not have chosen to reside within what would have been the periphery of a tidal marsh or at least, *phragmites/ cyperus* reed beds, swamp and riparian forest. The alternative site location (orange polygon in Fig.1) lies on higher ground. However, the area has been subject to intensive transformation, including planting of sugarcane, road construction and access tracks for cane harvesting.

No archaeological material was observed. However, the access servitudes for the pipeline through the coastal foreshore dunes and the immediate environs were “red-flagged” for the presence of shell middens.

Site inspections revealed no evidence of such. The intertidal zone where the intake/outlet pipes are proposed is a sandy beach devoid of a rocky shoreline. Intertidal rocky outcrops occur 850m north and 3km south of the abstraction point which precludes the likely occurrence of shell middens at this l*ocale*.

The remainder of the pipeline servitude options traverse, or are to be drilled through, areas of intensive landscape modification (tarred roads, railway servitude and river floodplain). No primary context archaeology can be anticipated. Most of the Lovu floodplain has been under sugar cane production since the late 19th Century, and remains the principle agricultural activity. The area has also been subject to major disturbance by the now decommissioned landfill site located on the north bank of the Lovu River, immediately east of the N2. Significant erosion of this area has also occurred during major floods prior to the construction of training berms upstream of the bridge on the N2. This further precludes the presence of primary context archaeological remains.

Electrical transmission lines from the Kingsurg Sub-Station (Fig.1) to the plant site, and those to the intake pumps, traverse the Lovu floodplain and long established sugar cane fields. These transmission lines have no perceptible impact on discrete heritage resources.

The SAHRIS Palaeosensitivity Map indicates that the area has low to medium sensitivities. These were discussed with the Council for Geoscience[1]. Fossil bearing strata may occur in the general area, but are unlikely to occur in primary contexts within the Lovu paleo-channel deposits or the tertiary dune cordon. Consequently, no further palaeontological assessment is required.

Accordingly, we request that Amafa grant an exemption from an HIA for this activity, allowing the project to proceed with no further heritage resource mitigation.

Please can you notify ourselves on behalf of our client, the CSIR, as to the decision of Amafa in this regard.

Yours sincerely

Len van Schalkwyk
Principal Investigator.

[1] Dr. G. Botha. CEO and Senior Specialist Scientist at the Council for Geoscience, Pietermaritzburg.