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**RE: *REVISED RECOMMENDATIONS: PHASE 1 ARCHAEOLOGICAL IMPACT ASSESSMENT – UPGRADE OF THE SEWER PURIFICATION PLANT, SPRINGFONTEIN, FREE STATE, SOUTH AFRICA (2007-10-11)***

Middle Stone Age deposits were discovered during the Phase 1 Archaeological Impact Assessment (AIA) of the proposed development area for the abovementioned development. Stone Age deposits were identified in two contexts namely:

- 1) Low density *in situ* deposits; and
- 2) High density *ex situ* deposits in the disturbed sections / built-up areas of the old railway lines / access roads.

Without further information on the construction of the railway lines and the original sewerage development it was inferred that artefacts discovered in disturbed sections was scraped from the immediate vicinity, by inference implying that should development proceed, development may impact on original deposit.

Recommendations of the Phase 1 AIA report included that the site be either

- 1) Conserved; or
- 2) Preceded by Phase 2 archaeological mitigation.

Report recommendations were in the interim approved by SAHRA Free State (2007-10-11).

On 2007-10-17 a site visit was arranged, attended by representatives of Phethogo Consulting (the developer), NSVT Consultants and ArchaeoMaps to discuss a way forward for the development. Former development information and geological interpretation disclosed at the meeting greatly assisted with the reinterpretation of the Stone Age deposits. The following important facts came to the fore:

- 1) Deposits from the immediate vicinity were used in the construction of the existing sewerage works;
- 2) Construction of the existing treatment works did not coincide with any amendments i.e. upgrade of the existing access roads (old railway lines); and

- 3) Material from the access roads / old railway lines is geologically 'foreign' to the environment. (Material used in the original construction of the railway line 'ballists' includes a number of geological components inclusive of a 'gravel component', the component containing the archaeological deposit). Based on assessment of the geological constituency of the 'ballists' it was suggested that material may well be of an Eastern Cape origin.

The origin of the 'ballist' gravel component was thus identified as the crucial factor for site interpretation; should the material in fact be of 'foreign' origin assessment and analysis of archaeological material will result in a biased interpretation of the past.

Transnet was approached for assistance with information on the original quarry locations for 'ballist' material. Documentation on former development used to be kept in a Spoornet archive / museum. However, with company formation the archive / museum was identified as a non-core function; upkeep and continuation of the archive / museum was largely ceased. While some documentation has been kept by Transnet ownership of all the original material is currently unknown.

The main railway line, the original line from Cape Town to the Witwatersrand, running north-south west of the proposed development area, was already constructed by the time of the Anglo-Boer war (1899-1902). The railway line extension to East London (the present day main access road) running east-west north of the development area was constructed in the 1960's. The gravel component of both lines yielded very similar archaeological material. The Spoornet archive / museum search however yielded no information on original quarry locations; not for the original Cape Town to Witwatersrand line and neither for the later East London extension.

Based on the necessary components for 'ballist' construction, material is seldom sourced from a single location. Material from various quarries is thus used, comprising the constituency for 'ballist' construction. Despite confirmation on the exact quarry locality(ies) of the gravel component(s) for the railway lines it was however pointed out that it is improbable that gravel for the lines would have been sourced in the Eastern Cape; a local source / sources closer to the development area would have been preferred; a point that can be supported by the fact that it is improbable that the same quarry situated at such a distance from the development would have been used prior to 1899 and again in the 1960's, while a number of suitable gravel sources are present in the Free State and closer to Springfontein. The probability exists that at least two quarries are under question; one for the gravel component (containing the archaeological material) of the earlier line and one for the later extension. Should this in fact be the case and based on similarities in the archaeological components of the two lines it is inferred that the quarries be located in close proximity to one another, at minimum within the same micro palaeo-environment and within reasonable proximity to the development area. Should a single quarry have been used, a feasible assumption based on archaeological similarities, the argument for a relatively local source is strongly supported considering the time lapse in railway line development. Based on the amount of gravel necessary for 'ballist' construction it was pointed out that development would not have relied on local surface material as a gravel source and that formal quarries, allowing the testing and planning of gravel resources, would have been used. Satellite imagery (GoogleEarth) yielded no prominent quarries in the immediate vicinity.

In conclusion, despite the fact that the original location(s) of quarries for the gravel component of 'ballist' material containing high density archaeological deposits remain elusive it can reasonably be inferred that the material is of 'foreign' origin to the immediate development area; a relatively local source is however inferred.

Confirmation on the fact that high density *ex situ* Middle Stone Age archaeological material identified within the development area are not scraped from the immediate vicinity negates the association with *in situ* low density lithic artefacts, comprising of a primarily flake-based deposit in association with handaxes, that may well be interpreted as the Fauresmith Industry or *First Intermediate*. The original inferred sequence, despite disturbance, ranging from the *First Intermediate* to the middle / later MSA has been suspended.

### ***Revised Recommendations***

Revised stratigraphic interpretation of the site necessitates a revision of the original recommendations:

- *It is recommended that development proceed without the developer having to comply with further archaeological requirements.*
  - 1) Low density *in situ* deposits: Low artefact ratios observed on the surface of the site without further stratigraphic association would designate the deposits a *Low Significance* and a *Generally Protected C* field rating. It is recommended that development proceed without the developer having to apply for a destruction permit.
  - 2) High density *ex situ* deposits in the disturbed sections / built-up areas of the old railway lines / access roads: Deposits are confirmed to be of 'foreign' origin to the immediate development area; designation of a site significance or field rating are thus pointless. It is recommended that development proceed.

I trust that you will consider the above revised recommendations in the affirmative.

Yours Sincerely,

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ArchaeoMaps

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