PROPOSED GWALA FARM SEWERAGE INFRASTRUCTURE PROJECT, TONGAAT, KWAZULU-NATAL

PHASE 1 HERITAGE IMPACT ASSESSMENT

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EXECUTIVE SUMMARY

eThekwini Water and Sanitation Unit, proposes construction of a collector sewer, sewage pump station, ancillary works and rising main on Gwala Farm. The proposed works will tie into the existing infrastructure and a portion of the existing 450mm trunk main will be regraded en-route to the Wastewater Treatment Works (WWTW). This report serves as the Phase 1 Heritage Impact Assessment (HIA) for the proposed construction of the Gwala Farm sewer infrastructure project.

The proposed collector sewer and trunk main that is to be regraded are longer than 300 m hence the project triggers subsection (a) of section 38 of the National Heritage Resources Act, 1999 (Act No 25 of 1999).

The proposed collector sewer, sewage pump station, rising main and ancillary works are situated on the area known as Gwala Farm which is situated in Belvedere North (Ward 61), Tongaat, eThekwini Municipality. The above components of the project are situated close to the Hlawe River. The trunk main that is to be regraded is situated approx. 2 km east of Gwala Farm close to the residential area of Watsonia and the Trurolands industrial area of Tongaat.

A site inspection was undertaken on 06 June 2017. Site conditions were in general good; there were areas that were densely vegetated that could not be accessed but most areas of the two project components were inspected. The HIA report will be submitted to Amafa aKwaZulu-Natali (Amafa) via the SAHRIS database for their assessment and comment.

The proposed sewage pump station is located in a sugar cane field between a gravel road and the Hlawe River. The area of the proposed pump station is highly disturbed due to the cultivation of sugar cane. Due to the thickness of the sugar cane growth, the site could not be accessed but the possibility of finding intact heritage resources is expected to be very low to negligible due to the highly disturbed nature of the site.

Almost the entire area between Gwala Farm settlement and the Hlawe River is cultivated with sugar cane and there is some subsistence farming occurring close to the settlement. The alignment of the proposed collector sewer passes through this area as well as through the Gwala Farm settlement. Gwala Farm is largely made up of formal housing with a number of traditional and informal structures interspersed between the formal housing. It is a highly disturbed area and no heritage sites were noted during the site inspection. Sections of the collector sewer that cross undeveloped areas were walked and no heritage sites were found.

The section of the trunk main to be regraded is situated along an open area adjacent to a tar road on one side and a watercourse on the other side. The southern end of the trunk main passes through very dense vegetation which could not be accessed due to the thickness of the vegetation. No heritage resources where found during the site inspection.

The fossil sensitivity map of South Africa indicates that the project area falls into a zone of moderate sensitivity. A moderate sensitivity requires that a desktop paleaontological study be undertaken. Due to the highly disturbed nature of both components of the project, there is a low risk that intact and significant fossil finds will be found therefore it is recommended that no desktop assessment is required.

The two project areas are disturbed by farming activity, residential development and existing infrastructure including roads. No heritage sites were found during the inspection of both areas. Based on the findings of the site inspection, the development can proceed with the proviso that the implementation of the mitigation measures provided in the report must be taken into account and implemented where necessary.

Contents

LIST OF FIGURES

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1 INTRODUCTION

The applicant, eThekwini Water and Sanitation Unit, proposes construction of a collector sewer, sewage pump station, ancillary works and rising main on Gwala Farm. The proposed works will tie into the existing infrastructure and a portion of the existing 450mm trunk main will be regraded en-route to the Wastewater Treatment Works (WWTW). The regarding of the trunk main forms part of the project. The project is located in Belvedere North (Ward 61), eThekwini Municipality.

This report serves as the Phase 1 Heritage Impact Assessment (HIA) for the proposed construction of the Gwala Farm sewer infrastructure project.

2 LEGISLATIVE CONTEXT

The proposed collector sewer and trunk main that is to be regraded are longer than 300 m hence the project triggers subsection (a) of section 38 of the National Heritage Resources Act, 1999 (Act No 25 of 1999), that states the following:

"(1) Subject to the provisions of subsections (7), (8) and (9), any person who intends to undertake a development categorised as—

(a) the construction of a road, wall, power line, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;

must notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development.

In addition, the project may impact on graves and structures, as well as archaeological and palaeontological resources that are protected in terms of sections 33, 34, 35, and 36 of the KwaZulu-Natal Heritage Act (No. 4 of 2008) as well as sections 34, 35, and 36 of the National Heritage Resources Act (NHRA).

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).

The Phase I HIA was undertaken to assess whether any heritage resources will be impacted by the proposed Gwala Farm sewer infrastructure project.

3 LOCATION

The proposed collector sewer, sewage pump station, rising main and ancillary works are situated on the area known as Gwala Farm which is situated in Belvedere North (Ward 61), Tongaat, eThekwini Municipality. The above components of the project are situated close to the Hlawe River. The trunk main that is to be regraded is situated approximately 2 km east of Gwala Farm close to the residential area of Watsonia and the Trurolands industrial area (see **Figures 1 – 3** below).

Figure 1: Map showing project components

Figure 2: Gwala Farm and project outline

Figure 3: Location of pipeline (indicated in blue) to be regraded

The proposed sewage pump station is situated at 29˚34’21.16’’S; 31˚04’29.69’’E.

The start point of the trunk main to be regraded is at: 29˚34’33.66’’S; 31˚05’40.78’’E and ends at 29˚34’25.86’’S; 31˚05’51.64’’E.

4 METHODOLOGY

A site inspection was undertaken on 06 June 2017. Site conditions were in general good; there were areas that were densely vegetated that could not be accessed but most areas of the two project components were inspected.

A survey of literature, including other heritage impact assessments completed in the area, was also undertaken in order to understand the potential heritage resources that could be found in the development area.

The HIA report will be submitted to Amafa aKwaZulu-Natali (Amafa) via the SAHRIS database for their assessment and comment.

5 HISTORICAL BACKGROUND OF PROJECT AREA

The greater Tongaat area has been relatively well surveyed for archaeological heritage sites by various institutions including the KwaZulu-Natal Museum. The available evidence indicates that the area contains a wide array of archaeological sites covering different time-periods and cultural traditions. Eighty heritage sites occur in the larger surrounding area. These range from Early Stone Age, Middle Stone Age, and Later Stone Age to Early Iron Age, Middle and Later Iron Age sites as well as historical sites relating to the rise of the Zulu Kingdom and the subsequent colonial period (Prins 2014:1).

Around 1 700 years ago, an initial wave of Early Iron Age people settled along the inland foot of the sand dunes on sandy but humus rich soils which would have ensured good crops for the first year or two after they had been cleared. These people produced a characteristic pottery style known as Matola. The Matola people exploited the wild plant and animal resources of the forest and adjacent sea-shore. The communities seemed to have been small groups of perhaps a few dozen people, moving into a landscape sparsely inhabited by Later Stone Age San hunter- gatherers. By 1500 years ago, another wave of Iron Age migrants

entered the area. Their distinct ceramic pottery have been classified to styles known as “Msuluzi” (AD 500-700), Ndondondwane (AD 700-800) and Ntshekane (AD 800-900) (Prins 2014: 2).

The name Tongaat was taken from the nearby Tongati River, the Zulu word for the indigenous trees that flourish on river banks. The history of Tongaat shows that the present site of Tongaat was selected in 1846 by a government commission as one of a number of villages, which it was hoped, would be established through emigration. The village was initially named “Victoria.‟ It developed into a town in the 19th Century because of the successful cultivation of sugar cane in the area. This led to the development of huge and very successful sugar estates which asserted themselves as a distinctive force in the cultural and political spheres of the region’s social history (Urban-Econ 2008:22).

Sugar cultivation in Tongaat was extremely labour intensive, particularly at seasonal peaks. From the 1860s the labour requirements of the sugar industry were met by indentured Indian labour. This gave rise to the establishment of an informal community of indentured labourers where no form of development control existed. The effects of the malaria epidemic in 1930 triggered the establishment of health committees that were eventually formalised as the Tongaat Town Board in 1944 (Urban-Econ 2008:22).

The Juggernath Puri Temple at Tongaat, built in 1920 by Pandit Sirikishan Maharaj, is said to be the tallest Hindu temple in South Africa and is a national heritage site. It is 21 m high and is modelled on the famous temple of the same name on the banks of the Ganges River in India (Derwent 2006:47).

6 RESULTS OF SITE INVESTIGATION

Pump station and collector sewer

The proposed sewage pump station is located in a sugar cane field between a gravel road and the Hlawe River. The area of the proposed pump station is highly disturbed due to the cultivation of sugar cane. Due to the thickness of the sugar cane growth, the site could not be accessed but the possibility of finding intact heritage resources is expected to be very low to negligible due to the highly disturbed nature of the site.

Figure 4: View of pump station site with river in background

Figure 5: Gravel road above sugar cane field where pump station is to be located

Figure 6: View of Gwala Farm settlement from sewage pump station

Almost the entire area between Gwala Farm settlement and the Hlawe River is cultivated with sugar cane and there is some subsistence farming occurring close to the settlement. The alignment of the proposed collector sewer passes through this area as well as through the Gwala Farm settlement. Gwala Farm is largely made up of formal (RDP) housing with a number of traditional and informal structures interspersed between the formal housing. It is a highly disturbed area and no heritage sites were noted during the site inspection.

Figure 7: Area through which collector sewer will pass between river and sugar cane fields

Sections of the collector sewer that cross undeveloped areas (for example, between the sugar cane fields and the Hlawe River) were walked and no heritage sites were found during the site inspection.

Figure 8: Mixture of formal and informal housing

Regrading of trunk main

The section of the trunk main to be regraded is situated along an open area adjacent to a tar road on one side and a watercourse on the other side. The grass in the area through which the trunk main runs had been recently cut; however, the undergrowth was still dense which limited visibility to a small extent. The southern end of the trunk main passes through very dense vegetation. It is situated close to a stream and accessing the area was not possible due to the thickness of the vegetation.

The section of the trunk main to be regraded was walked during the site inspection, apart from the southern section mentioned above, and no heritage resources where found.

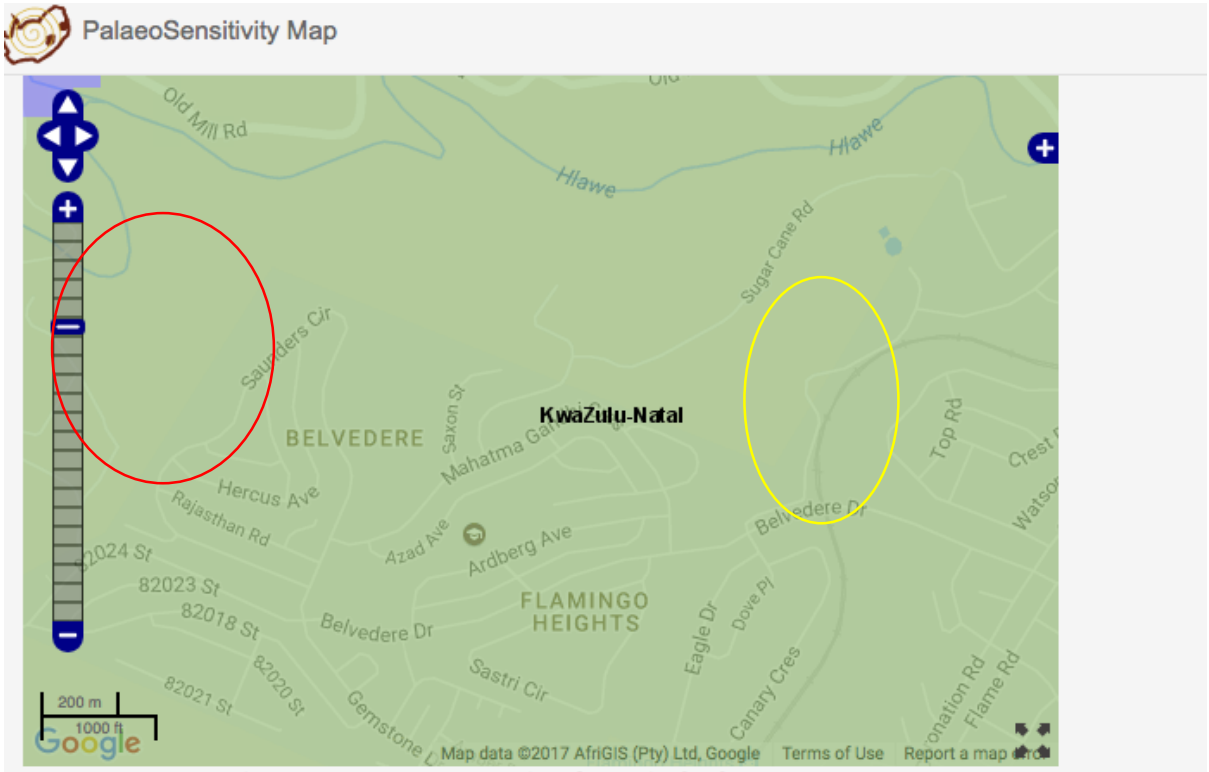
Figure 9: Southern section of trunk main situated in dense vegetation

Figure 10: View looking northwards along route of trunk main

Figure 11: View of trunk main route looking south wards

Figure 12: Northern end of trunk main route

The fossil sensitivity map of the South African Heritage Resources Authority (SAHRA) indicates that the project area falls into a zone of moderate sensitivity as indicated with the green colour on **Figure 14** below. A moderate sensitivity requires that a desktop paleaontological study be undertaken. Due to the highly disturbed nature of both components of the project, there is a low risk that intact and significant fossil finds will be found therefore it is recommended that no desktop assessment is required. However, a basic protocol for chance finds of fossils is included in the mitigation measures listed below.



1 in 250 000 geological formation layers are courtesy of the Council for GeoScience

For more information, go to How to Use the Palaeontological (fossil) Sensitivity Map

Colour	Sensitivity	Required Action
RED	VERY HIGH	field assessment and protocol for finds is required
ORANGE/YELLOW	HIGH	desktop study is required and based on the outcome of the desktop study, a field assessment is likely
GREEN	MODERATE	desktop study is required
BLUE	LOW	no palaeontological studies are required however a protocol for finds is required
GREY	INSIGNIFICANT/ZERO	no palaeontological studies are required
WHITE/CLEAR	UNKNOWN	these areas will require a minimum of a desktop study. As more information comes to light, SAHRA will continue to populate the map.

Figure 13: Fossil sensitivity of project areas (indicated with red and yellow circles)

7 RECOMMENDATION AND CONCLUSION

The two project areas are disturbed by farming activity, residential development and existing infrastructure including roads. No heritage sites were found during the inspection of both areas. Although the project areas fall within a moderate fossil sensitivity which requires a desktop palaeontological assessment, it is recommended that due to the disturbed nature of both project areas, no desktop study is required.

Based on the findings of the site inspection, the development can proceed with the proviso that the implementation of the mitigation measures, as listed below, must always be taken into account and implemented where necessary.

8 MITIGATION MEASURES

- For any chance finds, all work must cease in the area affected and the Contractor must immediately inform the Project Manager. A registered heritage specialist must be called to site for inspection. The relevant heritage resource agency (Amafa) must also be informed about the finding.
- The heritage specialist will assess the significance of the resource and provide guidance on the way forward.
- Permits to be obtained from Amafa if heritage resources are to removed, destroyed or altered.
- All heritage resources found in close proximity to the construction area to be protected by a 10m 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 could be human remains, the South African Police Service should also be contacted.
- If there are chance finds of fossils during construction, a palaeontologist must be called to the site in order to assess the fossils and rescue them if necessary (with an Amafa permit). The fossils must then be housed in a suitable, recognized institute

9 REFERENCES

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