INANDA-GLEBE RETICULATION PROJECT, ETHEKWINI MUNICIPALITY KWAZULU-NATAL

HERITAGE IMPACT ASSESSMENT

April 2017

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Executive Summary

The Water and Sanitation Unit of the eThekwini Municipality proposes the construction of 11 kilometres of 160mmØ HDuPVC sewer reticulation and numerous 1000mmØ precast concrete ring manholes in Inanda Glebe, Ward 44, eThekwini Municipality. The reason for the in situ upgrade is for the purpose of eliminating pit latrines by constructing a new waterborne sewage system.

As the proposed sewer reticulation is longer than 300m – (there will be 11 kilometres of sewer reticulation) - it triggers section 38 (1) (a) which refers to the construction of a road, wall, power line, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length that could potentially require an HIA. In addition, the proposed project could impact on graves, structures, 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 NHRA.

The area of the proposed development is situated in Ward 44, Inanda in the eThekwini Municipality and the approximate middle point of the area to receive the proposed sewer reticulation is at: S29º43'08.10"; E30º55'01.78".

A site inspection of the proposed project area was undertaken on 10 April 2017. The project area is located in an urban township with existing houses, other structures (such as spaza shops) and roads. It is therefore highly disturbed. Sections of the proposed reticulation works will run close to a stream and associated wetland. This area is heavily infested with invasive vegetation which limited visibility on the ground.

A large vacant area situated immediately east of the M25 was inspected. It was found to be a fallow field which had been cultivated several years back. The current vegetation cover is very thick reducing visibility but no heritage sites were found. Some subsistence farming was found on the southern edge of this vacant area abutting 108793 Street. The disturbed nature of the area indicates that the possibility of finding intact heritage sites is low.

The housing throughout the project area is largely made up of formal structures that are interspersed with some informal / backyard structures. The project area is highly disturbed due to this as well as other developments including the laying of a new water pipeline through a section of the project area.

An area where Shembe followers worship was found in the project area. The site is situated at: S 29º42'53.0"; E 30º55'06.1". This area should be avoided by the proposed reticulation works as

the site is of importance to those who use it. No other heritage resources were found during the site inspection.

The South African Heritage Resources Agency's Fossil Sensitivity Map indicates that the project area falls within an area of moderate sensitivity which requires that a desktop study is undertaken. However, due to the highly disturbed nature of the project area it is unlikely that intact fossils deposits (if any) will be found and it is therefore recommended that no desktop study is required.

It is recommended that the installation of the sewer reticulation proceed with the proviso that the recommendations regarding the Shembe site are adhered to as well as the implementation of the mitigation measures provided in Chapter 9 of this report.

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1. INTRODUCTION

The Water and Sanitation Unit of the eThekwini Municipality proposes the construction of 11 kilometres of 160mmØ HDuPVC sewer reticulation and numerous 1000mmØ precast concrete ring manholes in Inanda Glebe, Ward 44, eThekwini Municipality. The reason for the *in situ* upgrade is for the purpose of eliminating pit latrines by constructing a new waterborne sewage system.

An Environmental Authorisation DM/0002/2014 in terms of GNR543 of the EIA Regulations 2010 was granted for the Ntuzuma sewer reticulation project, the outfall sewer to which the proposed Inanda Glebe reticulation drains. Due to the additional sewer reticulation in Inanda Glebe, eThekwini Water and Sanitation is seeking Environmental Authorisation for this project.

The proposed Inanda Glebe reticulation project is situated immediately north of and alongside the Ntuzuma project.

2. LEGISLATIVE CONTEXT OF PROJECT

As the proposed sewer reticulation is longer than 300m – (11 kilometres of sewer reticulation is proposed) - it triggers section 38 (1) (a) which refers to the construction of a road, wall, power line, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length that could potentially require an HIA.

In addition, the proposed project may impact on graves, structures, 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 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).

A Phase I HIA was undertaken to assess whether any heritage resources will be impacted by the proposed sewer reticulation project.

3. LOCATION OF THE SITE

The area of the proposed development is situated in Ward 44, Inanda and the approximate middle point of the area to receive the proposed reticulation is at: S29º43’08.10”; E30º55’01.78”. See **Figures 1 and 2** below.

It is the understanding of the specialist that no houses will be affected by the proposed reticulation works and that it will be installed along road reserves and between houses.

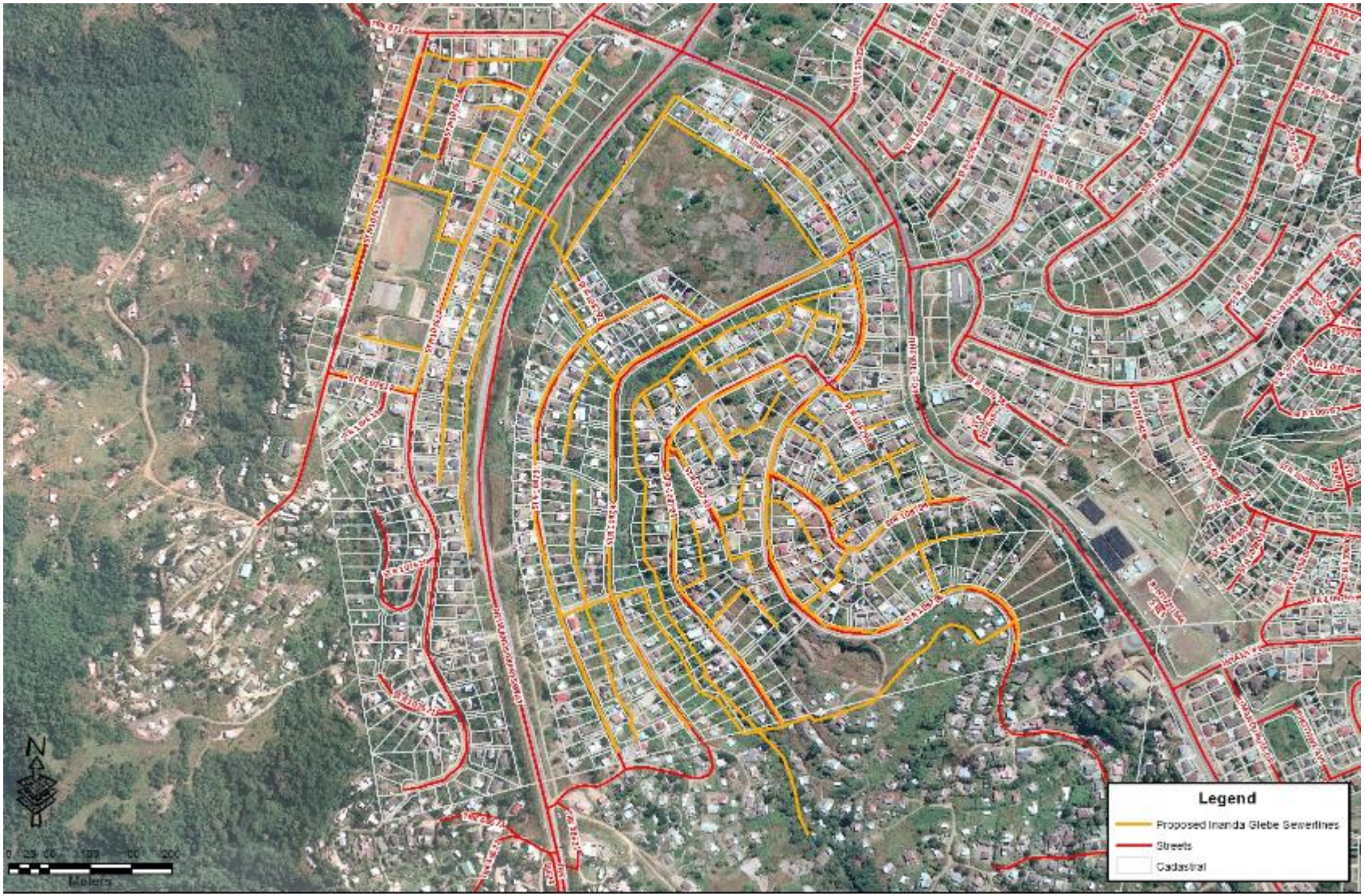


Figure 1: Location of proposed Inanda Glebe reticulation project

Figure 2: Reticulation project (indicated in blue) in wider geographic environment

4. TERMS OF REFERENCE

To undertake a Phase 1 Heritage Impact Assessment in order to determine the possible existence of archaeological, historical sites and resources in and/or close to the sewer reticulation project that could be impacted by the proposed activity

Provide mitigation measures to limit or avoid the impacts (if any) of the construction of the project on heritage resources.

5. METHODOLOGY

A survey of literature, including other heritage/archaeological impact assessment reports completed in the wider geographical area, was undertaken in order to place the development area in an archaeological and historical context.

A site inspection of the proposed reticulation project was undertaken on 10 April 2017. The project site is located in an urban township with existing houses, other structures (such as spaza shops) and roads. It is therefore highly disturbed by such developments. Sections of the proposed reticulation works will run close to a stream and associated wetland. This area is heavily infested with invasive vegetation which limited visibility.

6. HISTORICAL BACKGROUND OF THE STUDY AREA

The earliest agricultural sites in KwaZulu-Natal date to between AD 400 and 550. All of these sites were situated close to sources of iron ore, and within 15 km of the coast. Current evidence suggests it may have been too dry further inland at this time for successful cultivation. From AD 650 onwards, however, climatic conditions improved and agriculturists expanded into the valleys of KwaZulu-Natal, where they settled close to rivers in savanna or bushveld environments (eThembeni Cultural Heritage 2013:20).

Twelve archaeological sites have been previously recorded within a 10km radius of the study area. These sites consists of Early Iron sites near valley bottoms, Late Iron Age sites near the tops of hills, and a few Late Stone Age sites in various localities (Anderson 2009:10) some distance from the project area.

According to Harber and Associates (2010:3), one of many sites in the valley now inundated to form the Inanda Dam, was named Kwagandaganda because tractors were utilized to speed up archaeological excavations during construction of the dam. The small Early Iron Age agricultural settlement with byres, evidence of built platforms, granaries, a forging area and a men's assembly area dating back to the sixth century prove that the Inanda area has been occupied by Bantu people for at least 1 500 years. Clay vessels, grindstones, clay cattle and figurines and remnants of dung reinforce this evidence.

In Inanda, under Mqhawe, the Qadi clan granted land to the Christians of the American Board so that schools would be built, access to farming equipment could be made available, and to assist when dealing with the colonial authorities could be offered. James Dube, the uncle of the chief becoming a devout Christian and one of the first black pastors. His son John Dube was born on the Inanda Mission. John Dube made an enormous social impact on Inanda and South Africa. He travelled to the USA to continue his education for the priesthood where he met the influential Booker T. Washington and returned to Inanda to establish the Ohlange Institute. He also founded the first Black newspaper in South Africa, and later was elected the first President of the ANC in 1912 (Harber and Associates 2010:4).

Etherington (1989:282) explains that the first Black Christian converts in the Colony of Natal were referred to as kholwa or Amakhlowa who were economically successful and that this success owed in part to the educational facilities of the mission schools (Etherington 1989:289). The kholwa were pioneers in many branches of commercial agriculture, experimenting in the 1850s with cotton, coffee, arrowroot and sesame, and sugar. The success of the education venture encouraged similar enterprises including the Inanda Seminary (Etherington 1989:289) which is situated approximately one kilometre north of the project area. The seminary was established in 1869 and is an Independent School for girls that falls under the auspices of the United Congregational Church of Southern Africa (UCCSA) (eNanda Online n.d:1).

7. RESULTS OF SITE INSPECTION

The community liaison officer (CLO), Mr Muziwenhlanhla Goodman Ndlovu accompanied the specialists during the site inspection. He indicated that to his knowledge the area started to develop around 20 years ago.

A large vacant area situated immediately east of the M25 was inspected. It was found to be a fallow field which had been cultivated several years back. The current vegetation cover is very thick reducing visibility and no heritage sites were found during the inspection. Some subsistence farming was found on the southern edge of the vacant area abutting 108793 Street. The disturbed nature of the area indicates that the possibility of finding intact heritage sites would be low. The CLO stated that it is proposed that a school be built on the vacant area as there is a shortage of schools in the immediate area.

Figure 3: Thick vegetation covering vacant area

Figure 4: Cultivation of maize on southern edge of vacant land

The proposed reticulation works will also be located in the residential immediately west of the M25. This area includes a large sports field and netball court and the area is highly disturbed.

Figure 5: Sports field

The housing throughout the project area is largely made up of formal structures that are interspersed with some informal / backyard structures. The project area is highly disturbed due to this as well as other developments including the laying of a new water pipeline through a section of the project area (see **Figure 7** below).

Figure 6: Formal housing with clearing for garden in foreground

Figure 7: Excavations for water pipeline

Figure 8: View of section of project area

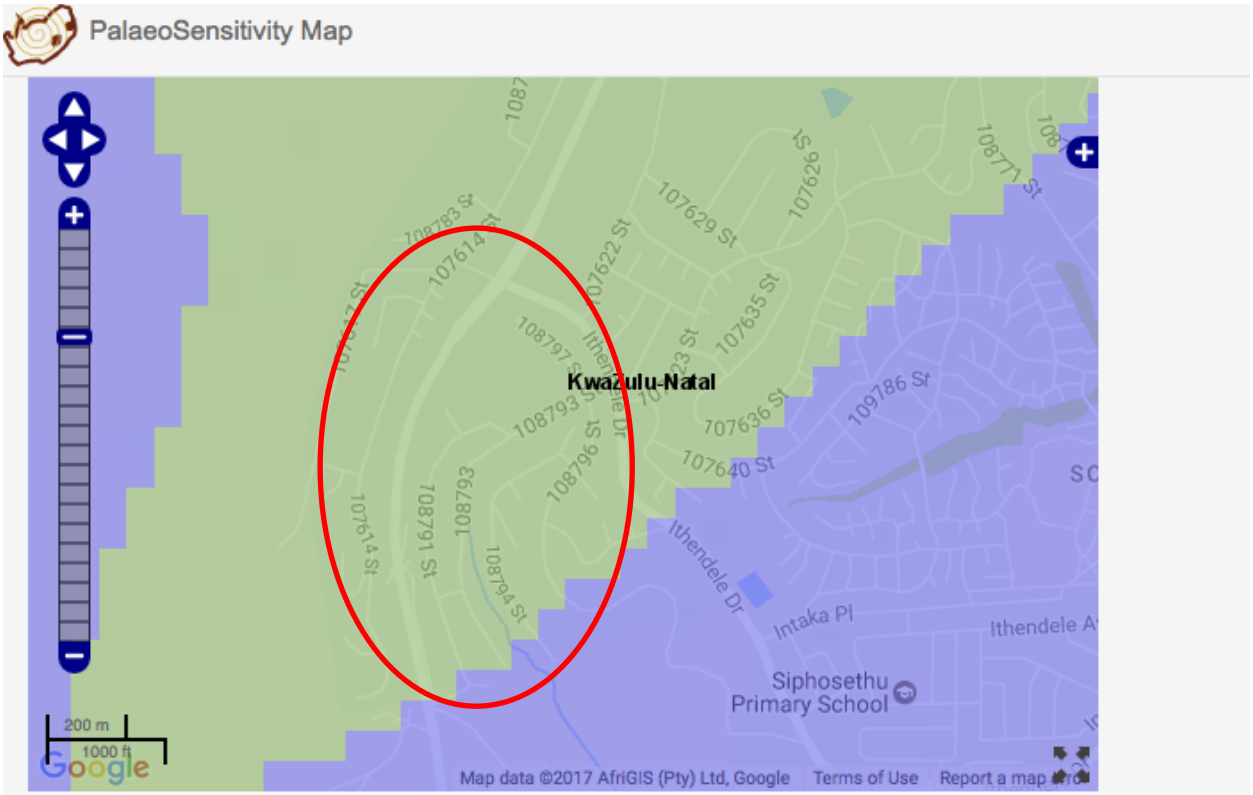
An area where Shembe followers worship was found in the project area. The site is situated at: S 29º42'53.0"; E 30º55'06.1". This area should be avoided by the proposed reticulation works as the site is of importance to those who use it. Mr Ndlovu mentioned that the municipality had

provided the land to the Shembe and had planted the trees visible in **Figures 9 and 10** below. The area is fenced and the grass was being cut during the site inspection.

Figure 9: Section of Shembe worship area

Figure 10: Shembe worship area

No other heritage resources were found during the site inspection. Mr Ndlovu said that the residents use cemeteries in Inanda and KwaMashu to bury their dead hence there were no graves in the project area.



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 11: Fossil sensitivity of project area (indicated with red circle)

The South African Heritage Resources Agency's (SAHRA) Fossil Sensitivity Map indicates that the project area falls within an area of moderate sensitivity which requires that a desktop study is undertaken. However, due to the highly disturbed nature of the project area it is unlikely that intact fossils deposits (if any) will be found and it is therefore recommended that no desktop study is required. The proposed development is unlikely to affect any fossil bearing deposits unless the excavations go much deeper than 1.5m to 2m. A protocol for chance finds of fossils is included in Chapter 9 of this report.

8. RECOMMENDATIONS AND CONCLUSION

No heritage sites of significance were found during the site apart from the Shembe worship site which is significant in terms of its importance for the Shembe community. It is recommended that the sewer reticulation works avoid this site completely. If this cannot be done, then discussions must be held with the Shembe community to address the issue.

The CLO indicated that the community used cemeteries in Inanda and KwaMashu to bury their dead so there were no graves to his knowledge amongst the residential dwellings. None were found during the site inspection.

It is therefore recommended that the installation of the sewer reticulation proceed with the proviso that the recommendations regarding the Shembe site are adhered to as well as the implementation of the mitigation measures listed below.

9. MITIGATION MEASURES

- For any chance finds, all work will cease in the area affected and the Contractor will 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/s.
- The heritage specialist will assess the significance of the resource and provide guidance on the way forward.
- Permits must be obtained from Amafa if heritage resources are to be removed, destroyed or altered.
- All heritage resources found in close proximity to the construction area are to 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 should also be contacted.
- If there are chance finds of fossil deposits 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.

10. REFERENCES

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