PROPOSED SALT ROCK SANITATION SCHEME, KWADUKUZA MUNICIPALITY, KWAZULU-NATAL

Desktop Heritage Assessment

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FOR: **ENVIROPRO**
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REF.: **EVP1463**

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EXECUTIVE SUMMARY

Siza Water proposes the construction of the new Salt Rock sanitation scheme. The project will comprise a new DN200 HDPE pumped main approximately 1.5km long from the existing Hugh Dent pump station to the existing Salt Rock pump station, new DN160 – DN200 gravity mains, service connections to the respective properties and tie-in works at both the Hugh Dent and Salt Rock pump stations.

A desktop heritage assessment was undertaken for the project as the proposed pipeline and associated work is located in a highly urbanised and disturbed area along existing roads and road verges in the town of Salt Rock.

The length of the proposed sewer pipeline is 1.5km hence it hence it triggers section 41 (1)(a) of the KwaZulu-Natal Amafa and Research Institute Act, 2018 (Act No 5 of 2018) which lists developments or activities that may require a heritage assessment. Section 41 (1)(a) 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.

The project is located in the town of Salt Rock which is situated along the northern coast of KwaZulu-Natal. The proposed reticulation scheme will be installed along several roads in the town that are situated between the Hugh Dent pump station (to the north) and the Salt Rock pump station (to the south) including Basil Hulett Drive, Garden Road, Hewitt Road and Dunkirk Road.

Photographs of the roads along which the pipeline is proposed to be installed were provided to the specialist by the Environmental Assessment Practitioner. Older maps and aerial photographs were consulted in order to understand what the project site was like previously. These maps and photographs were obtained from the Department of Rural Development and Land Reform's CDNGI Geospatial Portal.

A 1937 aerial photograph of the project area shows development close to the coast line and inland to some extent with areas that appear to be cleared of vegetation possibly in anticipation of development. Several roads are also depicted. A section of the study area can be seen in the 1942 topographic map (2931CA) which shows roads, trees, bushes, telephone lines, some cultivated land and a hotel. The 1968 topographic maps (2931AC and 2931CA) show an area that is developing with several structures and roads visible as well as a golf course. The 1983 aerial image of Salt Rock shows intensive residential development of much of the area where the proposed sanitation scheme is proposed.

The fossil sensitivity map of the South Africa indicates that the sanitation scheme falls mainly into a zone of high fossil sensitivity with a small section near the Hugh Dent pump station falling into a zone of very high fossil sensitivity. The proposed sanitation scheme falls mainly into a zone of high fossil sensitivity with a small section falling into a zone of very high fossil sensitivity. A desktop palaeontological study found that the pipeline route lies on the aeolianite and red and white sands and basal conglomerate of the Umkwelane Formation, Maputaland Group. The surface has loose sands and dense vegetation so the surface will not preserve any fossils. There is a small chance that marine molluscs and shark teeth from the Umkwelane Formation might be disturbed from below ground sediments. Therefore, a Fossil Chance Find Protocol should be added to the EMPr. Based on this information it is recommended that no palaeontological site visit is required unless fossils are found when excavations commence and that the project should be authorised

The aerial photographs and topographic maps show an area that has steadily developed over the years since the 1930s with surrounding areas increasingly been cultivated which is especially visible in the 1969 images. The areas along which the reticulation scheme is proposed show highly developed, urbanised areas with manicured and paved verges, residential dwellings and complexes, as well as road signage, shops and security fencing.

Due to the ongoing development that has taken place in Salt Rock, the likelihood of encountering significant heritage resources in the study area is extremely low. The potential impacts to heritage resources are deemed to be of very low significance. As no significant impacts to heritage resources are expected, and taking cognisance of the mitigation measures provided below, it is recommended that the Salt Rock sanitation scheme proceed from a heritage perspective.

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I, Jean Beater, act as an independent specialist for this project and I do not have any vested interest either business, financial, personal or other, in the proposed activity other than remuneration for work performed in terms of the Environmental Impact Assessment Regulations, 2014.

SPECIALIST DETAILS

Name	Qualification	Professional Registration
Jean Beater	MA (Heritage Studies) MSc (Environmental Management)	Member of Association of South African Professional Archaeologists (No. 349) Member of IAIAsa (No. 1538)

1. INTRODUCTION

Siza Water proposes the construction of the new Salt Rock sanitation scheme. The project will comprise of a new DN200 HDPE pumped main approximately 1.5km long from the existing Hugh Dent pump station to the existing Salt Rock pump station as well as new DN160 – DN200 gravity mains, service connections to the respective properties and tie-in works at both the Hugh Dent and Salt Rock pump stations (Enviropro 2021:1).

A desktop heritage assessment was undertaken for the project as the proposed pipeline and associated work is located in a highly urbanised and disturbed area along existing roads and road verges in the town of Salt Rock.

2. LEGISLATIVE BACKGROUND

The length of the proposed sewer pipeline is 1.5km hence it hence it triggers section 41 (1)(a) of the KwaZulu-Natal Amafa and Research Institute Act, 2018 (Act No 5 of 2018) which lists developments or activities that may require a heritage assessment. Section 41 (1)(a) 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".

The construction and operation of the sanitation scheme may also impact graves, structures, archaeological and palaeontological resources that are protected in terms of sections 37, 38, 39, and 40 of the KwaZulu-Natal Amafa and Research Institute Act, 2018.

In terms of section 3 of the NHRA, heritage resources are:
(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) 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).

3. LOCATION

The project is located in the town of Salt Rock which is situated along the northern coast of KwaZulu-Natal. The proposed reticulation scheme will be installed along several roads in the town that are situated between the Hugh Dent pump station (to the north) and the Salt Rock pump station (to the south) including Basil Hulett Drive, Garden Road, Hewitt Road and Dunkirk Road (**Figure 1**).

4. TERMS OF REFERENCE

Undertake a desktop heritage assessment in order to determine whether heritage resources could be impacted by the proposed sanitation scheme. Provide mitigation measures to limit or avoid the impact of the proposed project on heritage resources (if any).

Submit the HIA report to the provincial heritage resources authority, the KwaZulu-Natal Amafa and Research Institute (hereafter referred to as the Institute), for their assessment and comment.

Figure 1: Project location with sanitation scheme indicated in black

5. METHODOLOGY AND CONSTRAINTS

A survey of literature, including other heritage impact assessment reports completed for the surrounding area, was undertaken in order to ascertain the history of the area and what type of heritage resources have or may be found in the area of development.

Photographs of the roads along which the pipeline is proposed to be installed were provided to the specialist by Enviropro, the Environmental Assessment Practitioner (EAP).

Older maps and aerial photographs were consulted in order to understand what the project site was like previously. These maps and photographs were obtained from the Department of Rural Development and Land Reform's CDNGI Geospatial Portal (www.cdngiportal.co.za).

6. HISTORICAL BACKGROUND OF PROJECT & SURROUNDING AREA

According to van Jaarsveld (2010:10), the Iron Age commenced early in the first millennium when food producing communities introduced pottery and metallurgy into South African and KwaZulu-Natal's inland and coastal lowland areas. The KwaZulu-Natal Coast housed several Early Iron Age (EIA) communities. EIA communities have often lived very close to the beach with shell middens a common feature in or up against the dune vegetation of the beaches. The main constituent of the middens is shell of the brown mussel *Perna Perna*. Colonies grow on rocks on the beach. Later Iron Age communities seldom settled close to the beach.

The earliest agricultural sites in KwaZulu-Natal date to between AD 400 and 550. All are situated close to sources of iron ore, and within 15 km of the coast. From 650 onwards, however, climatic conditions improved and agriculturists expanded into the valleys, where they settled close to rivers in savanna or bushveld environments (eThembeni 2013:19-20). The beginning of the Late Iron Age saw settlements no longer located in river valleys, but built on higher ground where homesteads would benefit from breezes and good views for strategic purposes (eThembeni 2008:13-14).

The name Salt Rock originates from King Shaka's days when Zulu women used to collect dried salt off the rocks at low tide (Showme 2009:3). Salt Rock owes much of its history to Basil Hulett and his wife Gwen who started not only the Salt Rock Hotel but went on to develop the town of Salt Rock as found today (Wikipedia 2021:1). Hulett built the rock pool in the 1950s. Hulett was an avid rock surf fisherman. The concrete pillars near the tidal pool formed a network of fishing platforms linked with rope walkways to allow him to fish (Showme 2009:3).

7. DESKTOP ASSESSMENT

A 1937 aerial photograph (**Figure 2**) of the project area shows development close to the coast line and inland to some extent with areas that appear to be cleared of vegetation possibly in anticipation of development. Several roads are also depicted in the aerial photograph.

Figure 2: Aerial image of project area

A section of the study area can be seen in the 1942 topographic map (2931CA) which shows roads, trees, bushes, telephone lines, some cultivated land and a hotel (**Figure 3**). The 1968 topographic maps (2931AC and 2931CA) show an area that is developing with several structures and roads visible as well as a golf course (**Figure 4**).

Figure 3: 1942 map of southern half project area

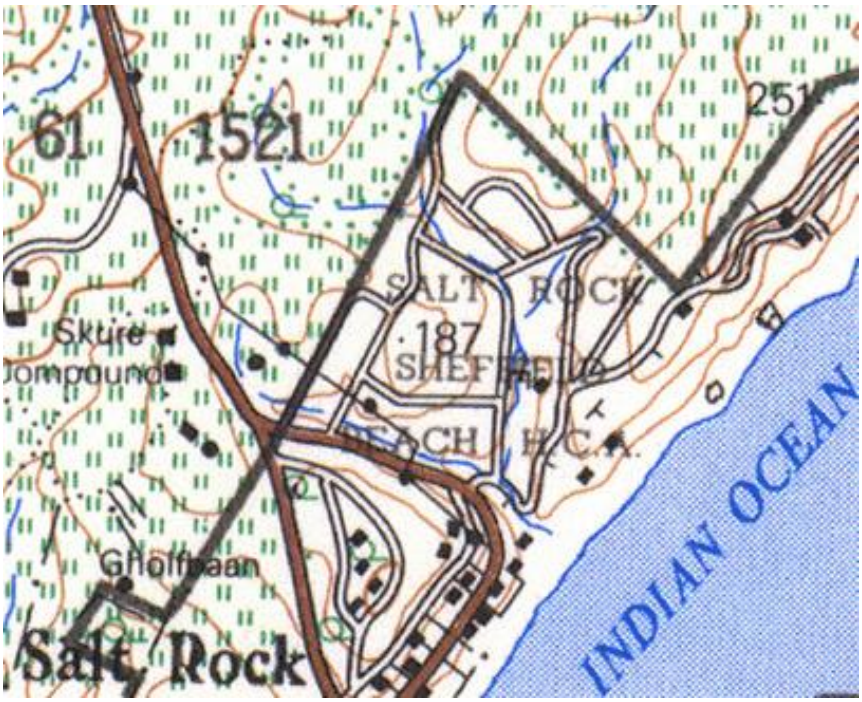

Figure 4: 1968 topographic maps of project area

The 1983 aerial image of Salt Rock shows intensive residential development of much of the area where the proposed sanitation scheme is to be installed as well as the N2 highway, Basil Hulett Drive and some the other roads mentioned below.

Figure 5: 1983 aerial image of project area

The photographs that follow are of the roads along which the reticulation system is proposed to be installed. Garden Road is the most southerly road along which the reticulation project is proposed.

Figure 6: Section of Garden Road with boundary walls visible

Figure 7: Section of Garden Road

Figure 8: Northern section of pipeline route along Garden Road t

The following photographs show sections of one of the main roads in Salt Rock, namely, Basil Hulett Drive along which the pipeline is proposed.

Figure 9: Basil Hulett Drive

Figure 10: Section of Basil Hulett Drive near shopping centre

Figure 11: Intersection of Basil Hulett Drive and Shrimp Lane

Figures **12 – 14** are photographs of the pipeline route along Shrimp Lane which then becomes Hewitt Road.

Figure 12: T-junction of Shrimp Lane and Hewitt Road

Figure 13: Hewitt Road

Figure 14: Section of Hewitt Road

North of Hewitt Road is Dunkirk Road. Photographs of Dunkirk Road can be seen in **Figures 15 - 17.**

Figure 15: Section of Dunkirk Road

Figure 16: Dunkirk Road

Figure 17: Dunkirk Road showing verge on either side of road

Hugh Dent Road gives its name to the northern pump station that forms part of the sanitation scheme. The pipeline will run along Hugh Dent Road, parts of which are shown in **Figures 18 – 20** below.

Figure 18: Hugh Dent Road

Figure 19: Section of Hugh Dent Road

Figure 20: Vegetation close to Hugh Dent Road

The fossil sensitivity map of South Africa indicates that the proposed sanitation scheme falls mainly into a zone of high fossil sensitivity with a small section near the Hugh Dent pump station falling into a zone of very high fossil sensitivity. A desktop palaeontological study found that the proposed sewer pipeline route lies on the aeolianite and red and white sands and basal conglomerate of the Umkwelane Formation (formerly Berea Formation), Maputaland Group. The surface has loose sands and dense vegetation so the surface will not preserve any fossils. There is a small chance that marine molluscs and shark teeth from the Umkwelane Formation (Maputaland Group) of middle Miocene to Pliocene age might be disturbed from below ground sediments. Therefore, a Fossil Chance Find Protocol should be added to the Environmental Management Programme (EMPr). Based on this information it is recommended that no palaeontological site visit is required unless fossils are found when excavations commence. As far as the palaeontology is concerned, the project should be authorised (Bamford 2022:2).

8. DISCUSSION AND CONCLUSION

Figures 2 - 5 show an area that has steadily developed over the years since the 1930s with surrounding areas increasingly been cultivated which is especially visible in the 1969 images. The photographs of the areas along which the reticulation scheme is proposed show highly developed, urbanised areas with manicured and paved verges, residential dwellings and complexes, as well

as road signage, shops and security fencing. There are some areas where dense vegetation grows close to the pavements and verges.

Due to the ongoing development that has taken place in Salt Rock, the likelihood of encountering significant heritage resources in the study area is extremely low. The potential impacts to heritage resources are deemed to be of very low significance. As no significant impacts to heritage resources are expected, and taking cognisance of the mitigation measures provided below, it is recommended that the Salt Rock sanitation scheme proceed from a heritage perspective.

9. MITIGATION MEASURES

- For any chance heritage finds, all work must cease in the area affected and the Applicant / Contractor must be immediately informed. A registered heritage specialist must be called to site to inspect the finding/s. The Institute must 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 the Institute if heritage resources are to be removed, destroyed or altered.
- Under no circumstances may any heritage material be altered, destroyed or removed from site unless under direction of a heritage specialist.
- Should any recent remains be found on site that could potentially be human remains, the South African Police Service as well as the Institute must be contacted. No SAPS official may remove remains (recent or not) until the correct permit/s have been obtained.
- All recommendations and mitigation measures provided in the desktop palaeontological study must be adhered to including the insertion of the chance fossil find protocol in the EMPr.

10. REFERENCES

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