

SECOND DRAFT FOR COMMENTS

PHASE 1 ARCHAEOLOGICAL IMPACT ASSESSMENT PROPOSED WASTEWATER TREATMENT WORKS PEARLY BEACH

Prepared for

SRK CONSULTING ENGINEERS AND SCIENTISTS

By

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EXECUTIVE SUMMARY

SRK Consulting requested that the Agency for Cultural Resource Management undertake a Phase 1 Archaeological Impact Assessment of the proposed Pearly Beach Wastewater Treatment Works (WWTW). A Phase 1 AIA is required because as per NHA!!!!

The aim of the study is to locate and map archaeological and heritage sites that may be negatively impacted by the planning, construction and implementation of the proposed project, to rate the significance of the potential impact and if necessary to propose measures to mitigate against the impact.

The approach followed in the study entailed undertaking a baseline survey of the proposed North and South site windows and the proposed pipeline route.

A desktop study was also undertaken.

The study area originally formed part of the Farm No. 319 Kleynre Hagel Kraal.

No archaeological or heritage remains were located during the baseline survey of the proposed WWTW sites and the proposed pipeline route.

~~The impact of the proposed Pearly Beach WWTW development on archaeological remains is rated to be low.~~

Potential impacts are likely to occur only during the construction phase of the proposed development where excavations for the proposed wastewater ponds and pipeline have the potential to uncover archaeological and precolonial human burial remains. The impact of the proposed Pearly Beach WWTW development on archaeological remains is rated to be very low provided that:

- An archaeologist is immediately informed if any archaeological remains are uncovered during construction activities.
- Human burials uncovered during bulk earthworks are not disturbed or removed until inspected by the archaeologist.

Both sites are therefore suitable for development and neither site is more preferred than the other???? – see my comment under Section 9.

No significant impacts to archaeological material will thus need to be mitigated prior to development activities.

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1. INTRODUCTION

1.1 Background and brief

SRK Consulting requested that the Agency for Cultural Resource Management undertake a Phase 1 Archaeological Impact Assessment of the proposed Pearly Beach Wastewater Treatment Works (WWTW) (Figure 1).

The aim of the study is to locate and map archaeological and heritage sites that may be negatively impacted by the planning, construction and implementation of the proposed project, and to propose measures to mitigate against the impact.

2. TERMS OF REFERENCE

The terms of reference for the study were:

- to identify and map heritage resources on the potential sites, immediately surrounding area and along the proposed pipeline route;
- to determine the importance of the heritage resources;
- to determine and assess the impact of the proposed WWTW and pipeline on the heritage resources;
- to recommend mitigation measures to minimise impacts associated with the proposed WWTW and pipeline; and
- to indicate whether the North site window and South site window are environmentally suitable or unsuitable for siting a WWTW and identify an environmentally preferred site.

3. STUDY APPROACH

The approach used in the study entailed a ground and vehicle survey of the proposed North and South site windows, and a detailed ground survey of the proposed pipeline route.

A desktop study was also undertaken.

3.1 Limitations

The proposed North and South site windows are infested with alien vegetation, resulting in extremely low archaeological visibility.

4. LEGISLATIVE REQUIREMENTS

4.1 The National Heritage Resources Act (Act No. 25 of 1999)

Please also refer to the section that says why a Phase 1 HIA is required – got to do with the fact that the proposed development footprint is greater than 5 000 m².

4.1.1 Structures (Section 34 (1))

No person may alter or demolish any structure or part of a structure which is older than 60 years without a permit issued by Heritage Western Cape (HWC), the responsible provincial resources authority.

4.1.2 Archaeology (Section 35 (4))

No person may, without a permit issued by HWC, destroy, damage, excavate, alter or remove from its original position, or collect, any archaeological material or object.

4.1.3 Burial grounds and graves (Section 36 (3))

No person may, without a permit issued by the South African Heritage Resources Agency (SAHRA), destroy, damage, alter, exhume or remove from its original position or otherwise disturb any grave or burial ground older than 60 years, which is situated outside a formal cemetery administered by a local authority.

As the delegated provincial heritage authority, a copy of this report must be submitted to HWC for the Attention of Dr Janette Deacon, Chairperson Heritage Western Cape, Private Bag X9067, Cape Town, 8000. Please say why the report must be submitted – is it for approval or is it for comment or is it because the NHA says developers must to this.

5. SITE DESCRIPTION

An aerial photograph of the study site and the proposed project is illustrated in Figure 2.

The proposed North site and South site windows are infested with alien vegetation (Figures 3 & 4). Some old farmlands in the North site window are evident (Figure 5).

Access to the North site window is via an old farm road. Some dumping alongside the road is evident. Dune mole rat activity is extensive on the site. A stand of Milkwood trees occurs in the North site window. There are also Milkwoods on the south site window!!!!

A number of sandy tracks have recently been opened in the South site window mainly to facilitate the exploitation of firewood. A few small informal work camp sites have been set up in the bush.

According to Mr Jan Koekemoer (pers. comm.), the proponent, since the late 1940s, the study area was used mainly for grazing, and therefore constitutes an altered and disturbed landscape.

Apart from the sandy tracks and campsites, there are no other man-made structures on the two sites.

6. FINDINGS

Shell middens, ancient tidal fishtraps (*visvuywers*) and burials have been recorded along the rocky shoreline at Pearly Beach (Avery 1974, 1976; Kaplan 2000a, 2002; Rudner 1968), Buffelsjachtbaai (Hart & Halkett 1991), Quoin Point, Die Dam, Duinbaai, Soetfontein, Sandy Point, Kleinbaai and Danger Point (Kaplan 1993, 1996,

2000b; Rudner 1968). A perlemoen-rich midden at Pearly Beach produced a date of 1450 ± 50 BP (G. Avery, pers. comm.). The region, with its rocky shoreline, acted as foci that attracted Later Stone Age¹ (LSA) people as it offered greater opportunities for the exploitation of marine foods, particularly shellfish.

Avery (1976) suggested that the large perlemoen-rich middens at Pearly Beach represented processing or 'transit' sites, where large volumes of perlemoen were collected at low spring tides, when Haliotis could be reached. The shellfish represented the optimum resource because of its size.

Avery (1976) argued that shellfish meat was prepared mainly for bulk drying, and then transported to inland sites for storage and consumption. Drying allowed for very large but lighter volumes of protein-rich meat to be transported and stored, free of any pathogenic bacteria (Henshilwood et al 1994).

According to Mr E. Bernade (pers. comm.), a resident of Pearly Beach, the study area originally formed part of the farm No. 319 Kleyne Hagel Kraal. The first title deed to the farm, measuring 1 330 Morgan, was granted to Mr Gideon Joubert on 16 June 1831 (E. Bernade pers. comm.).

The original Kleyne Hagel Kraal farmhouse is located at Klein Paradis Country House, at the turnoff to Pearly Beach. The farmhouse, currently used as a guesthouse, has been dramatically altered.

6.1 North site window

No archaeological remains were located in the North site window.

No shellfish remains were found associated with extensive dune mole rat activity on the site, which would otherwise suggest the presence of below ground archaeological remains.

6.2 South site window

No archaeological remains were located in the South site window.

6.3 Pipeline

No archaeological remains were located in the proposed pipeline route (Figure 6).

Factors which have led to the paucity of archaeological sites are most likely related to the location of the study area being far removed from the coastline which was a major source of food, and occupation was therefore likely to be closer to the coast at least during LSA times.

I am concerned that you have not made mention of the archaeological sites as indicated in the map I sent you which was copied from the Gansbaai Structure Plan. My concern is that IAPs who are familiar with the document may also notice this and think that we are not doing our work properly. Perhaps you should call Steyn Larsen Planners who compiled the report and ask them whichy archaeologist they used and find out more about these sites????

¹ A term referring to the last 20 000 of precolonial history in southern Africa.

7. IMPACT IDENTIFICATION AND ASSESSMENT

Potential impacts are likely to occur only during the construction phase of the proposed development where excavations for the proposed wastewater ponds and pipeline have the potential to uncover archaeological and precolonial human burial remains.

7.1 North site window

~~The impact of the proposed Pearly Beach WWTTW development on archaeological remains is rated to be low.~~

The probability of locating any significant archaeological sites or remains during implementation (the construction and operation) of the proposed project WWTTW and associated pipeline is also rated to be low (or improbable). The impact of the proposed Pearly Beach WWTTW development on archaeological remains is therefore rated to be very low provided the recommended mitigation measures are implemented (see Section 8).

The assessment of the potential impact on archaeological resources is summarised in Table 1.

Table 1. Archaeological impact assessment of the North site window proposed Pearly Beach Wastewater Treatment Works: Impact; on Destruction of archaeological resources. The proposed North window.

	Without Mitigation	With Mitigation
Extent	Site specific	Site specific
Duration	Temporary	Temporary
Intensity	Low	Low
Probability	Improbable	Improbable
Significance	Very Low	Very low
Status	Positive	Positive
Confidence	High	High

7.2 South site window

~~The impact of the proposed Pearly Beach WWTTW development on archaeological remains is rated to be low.~~

The probability of locating any significant archaeological sites or remains during implementation (construction and operation) of the proposed project is also rated to be low (or improbable). The impact of the proposed Pearly Beach WWTTW development on archaeological remains is therefore rated to be very low provided that the recommended mitigation measures are implemented (Section 8).

The assessment of the potential impact on archaeological resources is summarised in Table 2.

Table 2. Archaeological impact assessment of the proposed South site window Pearly Beach Wastewater Treatment Works: Impact; Destruction of archaeological resources. The proposed South window.

	Without Mitigation	With Mitigation
Extent	Site specific	Site specific
Duration	Temporary	Temporary
Intensity	Low	Low
Probability	Improbable	Improbable
Significance	Very-Low	Very-Low
Status	Positive	Positive
Confidence	High	High

7.3 Pipeline

The impact of the proposed Pearly Beach WWTW pipeline on archaeological remains is rated to be low.

The probability of locating any significant archaeological sites or remains during implementation (construction and operation) of the proposed project is rated to be low (or improbable). The impact of the proposed Pearly Beach WWTW pipeline on archaeological remains is rated to be very low provided the recommended mitigation measures are implemented (see Section 8).

The assessment of the potential impact on archaeological resources is summarised in Table 3.

Table 3. Archaeological impact assessment of the proposed Pearly Beach Wastewater Treatment Works: Impacts on archaeological resources. The proposed pipeline. Impact: Destruction of archaeological resources

	Without Mitigation	With Mitigation
Extent	Site specific	Site specific
Duration	Temporary	Temporary
Intensity	Low	Low
Probability	Improbable	Improbable
Significance	Very-Low	Very-Low
Status	Positive	Positive
Confidence	High	High

8. MITIGATION MEASURES

The following essential mitigation measures are recommended:

- Immediately consult an archaeologist should substantial shellfish remains or stone tools be uncovered during construction activities, an archaeologist should be immediately consulted.

The Environmental Control Officer should be briefed by the archaeologist what to look-out for during vegetation-clearing operations and bulk earthworks.

- If a human burial is encountered by accident during construction, the remains must be left as undisturbed as possible. The local police must be informed as well as the South African Heritage Resources Agency (SAHRA) (Mrs Mary Leslie 021 4624502). If the burial is deemed to be over 60 years old and no foul play is suspected, an emergency exhumation permit may be issued by SAHRA for an

archaeologist to exhume the remains under such provisions as SAHRA deems appropriate.

The following optional mitigation measure is recommended:

- Should an Environmental Control Officer be designated during construction then appoint an archaeologist to brief the ECO what to look out for.

9. SITE SUITABILITY AND COMPARISON

The assessment has shown that no archaeological remains were located during the baseline survey of the proposed WWTW North site and South site windows, and the proposed pipeline route.

Mitigation measures, as outlined above, will minimise the possible impacts that might occur during the construction phase of the proposed project.

The study has shown that both sites are suitable for development and that neither site is more preferred in terms of the potential archaeological impacts. JK – think about this – perhaps one of the sites is more preferred, even if the reason is small???

10. CONCLUSION

AtThe archaeological impact assessment of the proposed Pearly Beach WWTW has rated the potential impact to ~~identified no significant impacts to archaeological material as being low provided that; will need to be mitigated prior to development activities:~~

- An archaeologist should be immediately informed if any archaeological remains are uncovered during construction activities.
- Human burials uncovered during bulk earthworks shouldare not be disturbed or removed until inspected by the archaeologist.

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