

A LETTER OF RECOMMENDATION (WITH CONDITIONS) FOR THE EXEMPTION OF A FULL PHASE 1 ARCHAEOLOGICAL HERITAGE IMPACT ASSESSMENT FOR THE PROPOSED UPGRADING OF THE HANKEY SANITATION SYSTEM WITHIN THE KOUGA LOCAL MUNICIPALITY OF THE EASTERN CAPE PROVINCE



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PROJECT INFORMATION

Eastern Cape Heritage Consultants cc has been appointed by Terratest (Pty) Ltd to conduct a Phase 1 Archaeological Impact Assessment (AIA) for the proposed maintenance and upgrade of the sanitation system in Hankey within the Kouga Local Municipality, Eastern Cape Province.

The upgrading works will include the augmentation of the existing sewage bulk infrastructure in the residential areas of Hankey, Hankey Town, Old Town Hankey, and Phillipsville, by providing an additional pump station, a new rising main and a new waterborne gravity sewerage system for these areas. The areas to be serviced consist of some 449 erven. The total length of the lines will equate to approximately 11 000 m. In addition, a detention pond will be constructed adjacent to the pump station to deal with any sewage spillage because of major equipment or electrical failure. Sewage will be pumped through a UPVC (Un-plasticised Poly Vinyl Chloride-lined) pipeline, from the pump station, to the existing Hankey Wastewater Treatment Works (WWTW). The length of the rising main will be approximately 2 400 m. This rising main will have to cross the Klein River, running through Hankey, and the provincial surfaced road R331. An existing gravel road will also be upgraded to provide sufficient access to the pump station and detention pond.

In terms of the sewer pipeline crossing the Klein River, three options are proposed:

- 1) **Preferred Option:** The preferred option is to have the pipeline installed on the existing rail bridge, crossing the river and gravitate to the proposed pump station. The pipeline will be connected using stainless steel brackets to avoid corrosion and will also be installed using either stainless steel piping or a HDPE pipeline and coated for UV resistance and environmental conditions.
- 2) **Alternative Option 2:** The second option is to construct a new pipe bridge across the Klein River. The only difference to option 1 is that construction activities will be required on the embankments of the Klein River to install the pipe bridge support piers. Furthermore, the construction of a support pier required for the pipe bridge will have a reduced impact on the riverbed as compared to the construction via an open trench (See Option 3).
- 3) **Alternative Option 3:** The third option entails an open trench excavation within the river (conventional excavation with river diversion during construction). A more expensive construction method would be Horizontal Directional Drilling, which would require an excavation pit on either side of the river whereby a drilling rig would be used for the installation. The gravity pipe and rising main will be installed in a double barrel system where the two 160mm HDPE pipes would be installed in parallel in the same trench.

It is anticipated that the Preferred Option and Option 2 will have a reduced impact on the Klein River, including the riverbed, during construction, as compared to the open trench in the river associated with Option 3.

Proponent

Kouga Local Municipality

Consultant

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Purpose of the study

The purpose of the study was to conduct a Phase 1 Archaeological Impact Assessment (AIA) for for the proposed maintenance and upgrade of the sanitation system in Hankey within the Kouga Local Municipality, Eastern Cape Province, to describe and evaluate;

- the importance of possible archaeological sites, features and materials,
- the potential impact of the development on these resources and,
- to propose recommendations to minimize possible damage to these resources.

Site and Location

The area for the proposed maintenance and upgrade of the sanitation system in Hankey is located within the 1:50 000 topographic reference map 3324DD Hankey (Map 1). The proposed activities will take place in Hankey within the Kouga Local Municipality of the Eastern Cape Province (Map 2). The area is covered by dense grass and vegetation in places and the location for the proposed pump station and detention pond has been disturbed in the past by illegal dumping and a gravel access road (Figure 1). The proposed pump station and detention pond will be situated in the centre of the Hankey residential town areas, on the northern embankment of the Klein River, approximately 1,7 km before the Klein River discharges into the Gamtoos River. A general GPS reading for the proposed pump station and detention pond is: 33.50.135S, 24.52.830E. The rising main will cross the Klein River, running through Hankey and the provincial surfaced road R331 and will continue to the existing Hankey WWTW mostly along the existing road alignment.

Relevant Archaeological and Historical Assessments

- Binneman, J. 2006. A letter of recommendation (with conditions) for the exemption of a full phase 1 archaeological heritage impact assessment for the proposed Hankey sewer pipeline, Hankey, Eastern Cape Province. Prepared for Public Process Consultants. Port Elizabeth. Albany Museum. Grahamstown.
- Binneman, J. 2007. A letter of recommendation (with conditions) for the exemption of a full phase 1 archaeological heritage impact assessment for the proposed Hankey Golf Estate Development on Erf 1435, Hankey, Kouga Local Municipality, Eastern Cape Province. Prepared for Eco Solutions Environmental Consultants cc. Port Elizabeth. Eastern Cape Heritage Consultants cc. Jeffreys Bay.
- Binneman, J. 2008. A phase 1 archaeological heritage impact assessment for the proposed Sarah Bartmann project, Hankey, Kouga Local Municipality, Eastern Cape Province. Prepared for the Wilderness Foundation. Port Elizabeth. Eastern Cape Heritage Consultants cc. Jeffreys Bay.

- Binneman, J. 2010. A phase 1 archaeological heritage impact assessment for the proposed residential and mixed-use development on Erf 17 and Erf 1480, Weston residential area Hankey, Kouga Local Municipality, Eastern Cape Province. Prepared for Public Process Consultants. Port Elizabeth. Eastern Cape Heritage Consultants cc. Jeffreys Bay.
- Binneman, J. 2010. A letter of recommendation (with conditions) for the exemption of a full phase 1 archaeological heritage impact assessment for the proposed construction of the Waste Water Treatment Works at the Weston residential area, Hankey, Kouga Local Municipality, Eastern Cape Province. Prepared for Public Process Consultants. Port Elizabeth. Eastern Cape Heritage Consultants cc. Jeffreys Bay.
- Binneman, J. 2015. A letter of recommendation (with conditions) for the exemption of a full phase 1 archaeological heritage impact assessment for the proposed residential development on Erven 17, 245 and 250 at Hankey, Kouga Local Municipality, Eastern Cape Province. Prepared for Engineering Advice & Services (Pty) Ltd. Port Elizabeth. Eastern Cape Heritage Consultants cc. Jeffreys Bay.
- Logie, B. A historical report on Hankey, for the proposed Sarah Bartmann project in Kouga Municipality, Eastern Cape Province.

ARCHAEOLOGICAL INVESTIGATION

Methodology and results

Google aerial images as well as previous heritage reports related to the study area were studied prior to the investigation. The investigation was conducted on foot by an archaeologist. GPS readings were taken with a Garmin and all important features were digitally recorded. The archaeological visibility was poor due to the dense grass and other vegetation at the proposed river crossings and certain sections of the pipeline route. No archaeological sites/materials were observed in the access road or other disturbed areas at the location of the pump station and detention pond or along the pipeline route from the proposed pump station to the Hankey WWTW. In general, the area for the proposed development appears to be of low archaeological sensitivity and it is unlikely that any archaeological remains of any significance will be found *in situ* or exposed during the development. From an archaeological perspective the development may proceed as planned.

Although there are no graves or historical buildings on the proposed site for the new pump station and detention pond the proposed maintenance and upgrade activities will take place in close proximity to a historical church and other historical features such as houses older than 60 years, a “Narrow Gauge” Steel Rail Bridge, the Philip Graves, the Victoria tree and the Sarah Baartman Centre of Remembrance that is in the process of being developed (see Map 7). The Sarah Baartman grave site (that forms part of the Centre) is a declared National Heritage Site. There will also be a direct impact on the “Narrow Gauge” Steel Railway Bridge if the preferred option for sewer pipeline crossing the Klein River is selected. This feature as well as other features in the proximity of the proposed pump station, detention pond and river crossings must be assessed by a historian and a permit application should be submitted to the Eastern Cape Provincial Heritage Resources Authority (ECPHRA) in terms of Section 34 of the National Heritage Resources Act, No. 25 of 1999, if the alteration to the historical bridge remains the preferred option.

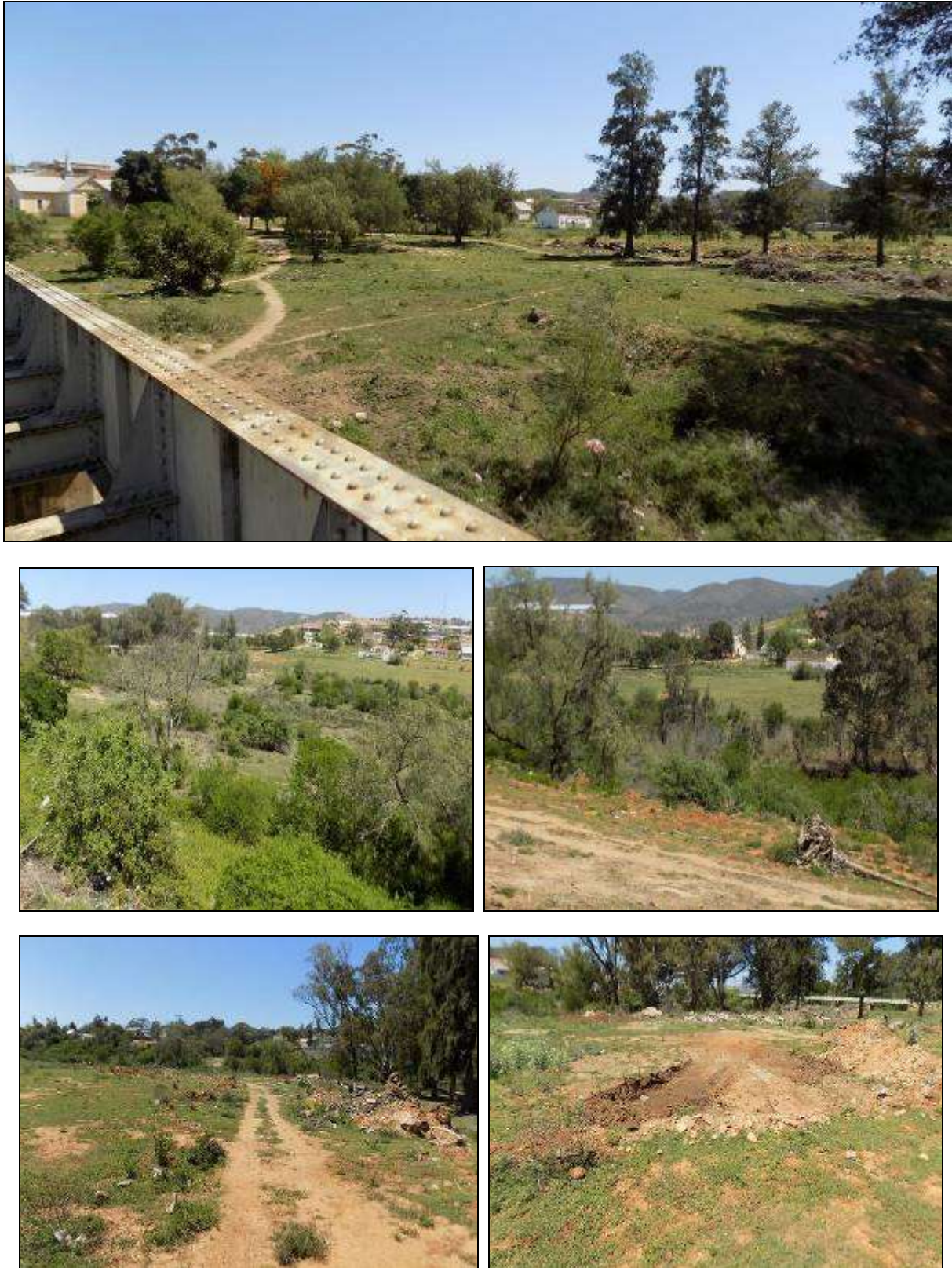


Figure 1. General views of the proposed preferred and alternative locations of the new pump station and detention pond as well as the access road that forms part of the upgrading of the Hankey Sanitation System within the Kouga Local Municipality of the Eastern Cape Province. Proposed access route bottom left picture.



Figure 2. General views of the preferred option for the sewer pipeline crossing the Klein River (top picture) and alternative options 2 and 3 that forms part of the upgrading of the Hankey Sanitation System within the Kouga Local Municipality of the Eastern Cape Province.



Figure 3. General views of the proposed sewer pipeline route from the pump station to the Hankey WWTW that forms part of the upgrading of the Hankey Sanitation System within the Kouga Local Municipality of the Eastern Cape Province.



Figure 4. General views of some of the historical features in close proximity to the proposed pump station, detention pond and river crossings that forms part of the Hankey Sanitation System, within the Kouga Local Municipality of the Eastern Cape Province. The “Narrow Gauge” Steel Rail bridge top and middle left pictures. Hankey Congregational Church middle right and bottom left pictures and the Philip graves with the Victoria tree indicated by the red arrow bottom right picture.

DISCUSSION AND CONDITIONS

No archaeological sites/materials were observed during the investigation of the proposed areas for the maintenance and upgrade of the Hankey Sanitation System. Although it is unlikely that archaeological remains will be found *in situ*, there is always a possibility that human remains and/or other archaeological and historical material may be uncovered during the development. Should such material be exposed then work must cease in the immediate area and it must be reported to the Albany Museum (Tel: 046 622 2312) or to the Eastern Cape Provincial Heritage Resources Authority (Tel: 043 745 0888), so that a systematic and professional investigation can be undertaken. Sufficient time should be allowed to remove/collect such material (See Appendix B for a list of possible archaeological sites that maybe found in the area). The developer must finance the costs should additional investigations be required.

A historian must be appointed to assess the impact of the development on historical heritage resources within the proximity of the proposed pump station, detention pond and river crossings and a permit application should be submitted to ECPHRA if there will be any direct impact on the “Narrow Gauge” Steel Rail Bridge.

LETTER OF RECOMMENDATION

It is recommended that the proposed upgrading of the Hankey Sanitation System within the Kouga Local Municipality of the Eastern Cape Province is exempted from a full Phase 1 Archaeological Heritage Impact Assessment. The proposed area for development appears to be of low archaeological sensitivity and it is therefore unlikely that any significant archaeological heritage remains will be found on the property. The proposed development may proceed as planned.

Note: This letter of recommendation only exempts the proposed development from a full Phase 1 Archaeological Heritage Impact Assessment, but not for other heritage impact assessments. It must also be clear that this letter of recommendation for exemption of a full Phase 1 archaeological heritage impact assessment will be assessed by the relevant heritage resources authority. The final decision rests with the heritage resources authority, which should give a permit or a formal letter of permission for the destruction of any cultural sites.

The National Heritage Resources Act (Act No. 25 of 1999, section 35) (see Appendix A) requires a full Heritage Impact Assessment (HIA) in order that all heritage resources, that is, all places or objects of aesthetics, architectural, historic, scientific, social, spiritual linguistic or technological value or significance are protected. Thus, any assessment should make provision for the protection of all these heritage components, including archaeology, shipwrecks, battlefields, graves, and structures older than 60 years, living heritage, historical settlements, landscapes, geological sites, palaeontological sites and objects.

GENERAL REMARKS AND CONDITIONS

It must be emphasized that this letter of recommendation for the exemption of a full Phase 1 archaeological heritage impact assessment is based on the visibility of archaeological sites/material and may not therefore, reflect the true state of affairs. Sites and material may be covered by soil and vegetation and will only be located once this has been removed. In the unlikely event of such finds being uncovered, (during any phase of construction work), it must be reported to the archaeologist at the Albany Museum in Makhanda (Grahamstown) (Tel: 046 622 2312) or to the Eastern Cape Provincial Heritage Resources Authority (Tel.: 043 745 0888) immediately. The developer must finance the costs should additional studies be required as outlined above. The *onus* is also on the developer to ensure that this agreement is honoured in

accordance with the National Heritage Act No. 25 of 1999. The consultant is responsible to forward this report to the relevant Heritage Authority for assessment, unless alternative arrangements have been made with the specialist to submit the report.

APPENDIX A: brief legislative requirements

Parts of sections 34, 35(4), 36(3) and 38(1) (8) of the National Heritage Resources Act, No. 25 of 1999 apply:

Structures

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 the relevant provincial heritage resources authority.

Archaeology, palaeontology and meteorites

35 (4) No person may, without a permit issued by the responsible heritage resources authority—

- (a) destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or any meteorite;*
- (b) destroy, damage, excavate, remove from its original position, collect or own any archaeological or palaeontological material or object or any meteorite;*
- (d) bring onto or use at an archaeological or palaeontological site any excavation equipment or any equipment which assist in the detection or recovery of metals or archaeological and palaeontological material or objects, or use such equipment for the recovery of meteorites.*

Burial grounds and graves

36. (3) (a) No person may, without a permit issued by SAHRA or a provincial heritage resources authority—

- (a) destroy, damage, alter, exhume or remove from its original position or otherwise disturb the grave of a victim of conflict, or any burial ground or part thereof which contains such graves;*
- (b) destroy, damage, alter, exhume, 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; or*
- (c) bring onto or use at a burial ground or grave referred to in paragraph (a) or (b) any excavation equipment, or any equipment which assists in the detection or recovery of metals.*

Heritage resources management

38. (1) Subject to the provisions of subsections (7), (8) and (9), any person who intends to undertake a development categorized as –

- (a) the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;*
- (b) the construction of a bridge or similar structure exceeding 50m in length;*
- (c) any development or other activity which will change the character of the site –*
 - (i) exceeding 5000m² in extent, or*
 - (ii) involving three or more erven or subdivisions thereof; or*

- (iii) involving three or more erven or divisions thereof which have been consolidated within the past five years; or
 - (iv) the costs of which will exceed a sum set in terms of regulations by SAHRA, or a provincial resources authority;
- (d) the re-zoning of a site exceeding 10 000m² in extent; or
- (e) any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority, must as the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development.

APPENDIX B: IDENTIFICATION OF ARCHAEOLOGICAL FEATURES AND MATERIAL FROM INLAND AREAS: guidelines and procedures for developers

Human Skeletal material

Human remains, whether the complete remains of an individual buried during the past, or scattered human remains resulting from disturbance of the grave, should be reported. In general, the remains are buried in a flexed position on their sides but are also found buried in a sitting position with a flat stone capping or in ceramic pots. Developers are requested to be on the alert for these features and remains.

Freshwater mussel middens

Freshwater mussels are found in the muddy banks of rivers and streams and were collected by people in the past as a food resource. Freshwater mussel shell middens are accumulations of mussel shell and are usually found close to rivers and streams. These shell middens frequently contain stone tools, pottery, bone, and occasionally human remains. Shell middens may be of various sizes and depths, but an accumulation which exceeds 1 m² in extent, should be reported to an archaeologist.

Fossil bone

All concentrations of bones, whether fossilized or not, should be reported.

Stone artefacts

These are difficult for the layman to identify. However, large accumulations of flaked stones which do not appear to have been distributed naturally, should be reported. If the stone tools are associated with bone remains, development should be halted immediately, and archaeologists notified.

Stone features and platforms

These occur in different forms and sizes, but easily identifiable. The most common are an accumulation of roughly circular fire cracked stones tightly spaced and filled in with charcoal. They are usually 1-2metres in diameter and may represent cooking platforms. Others may resemble circular single row cobble stone markers. These occur in different sizes and may be the remains of wind breaks or cooking shelters.

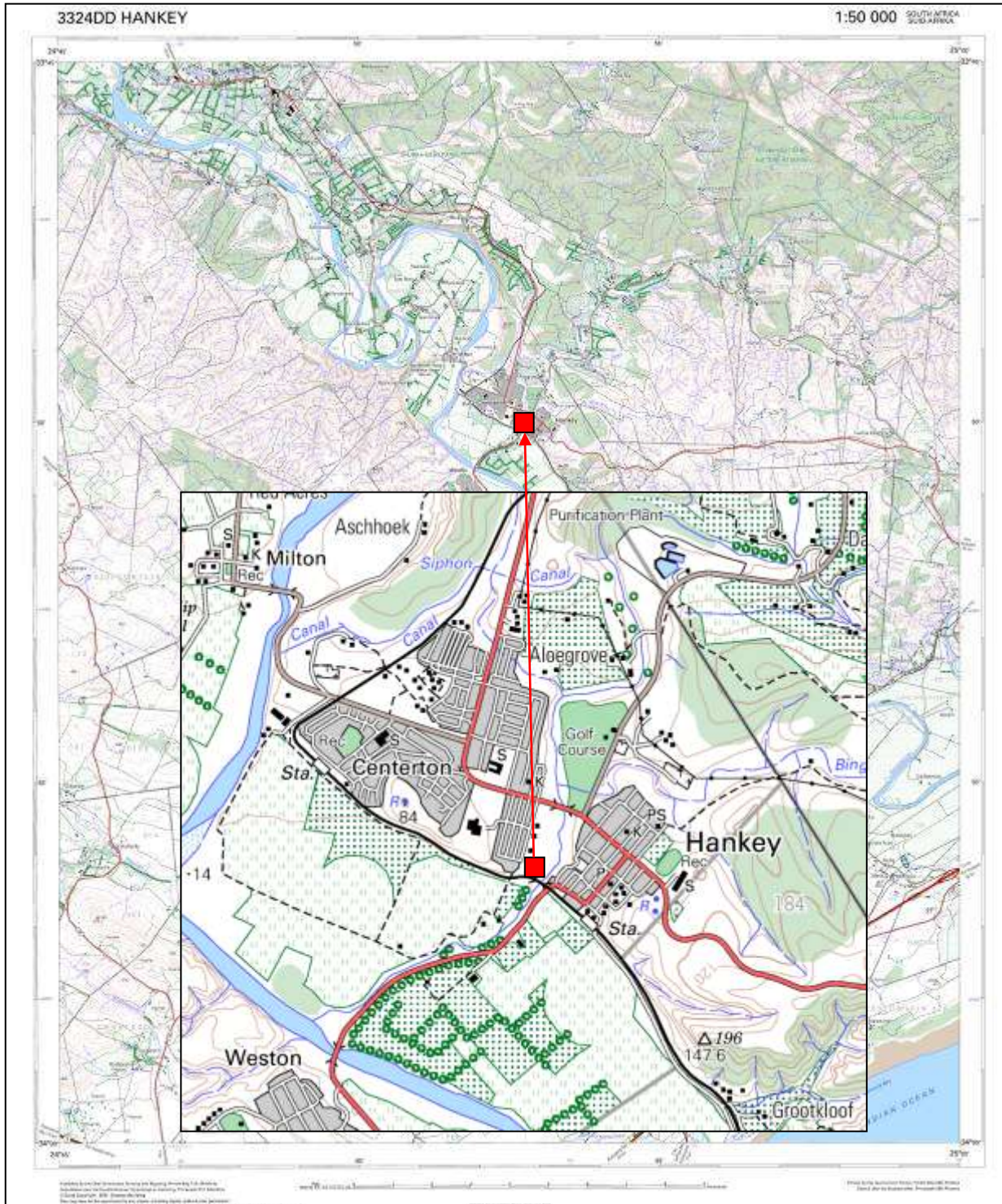
Large stone cairns

The most common cairns consist of large piles of stones of different sizes and heights are known as *isisivane*. They are usually near river and mountain crossings. Their purpose and

meaning are not fully understood however, some are thought to represent burial cairns while others may have symbolic value.

Historical artefacts or features

These are easy to identify and include foundations of buildings or other construction features and items from domestic and military activities.

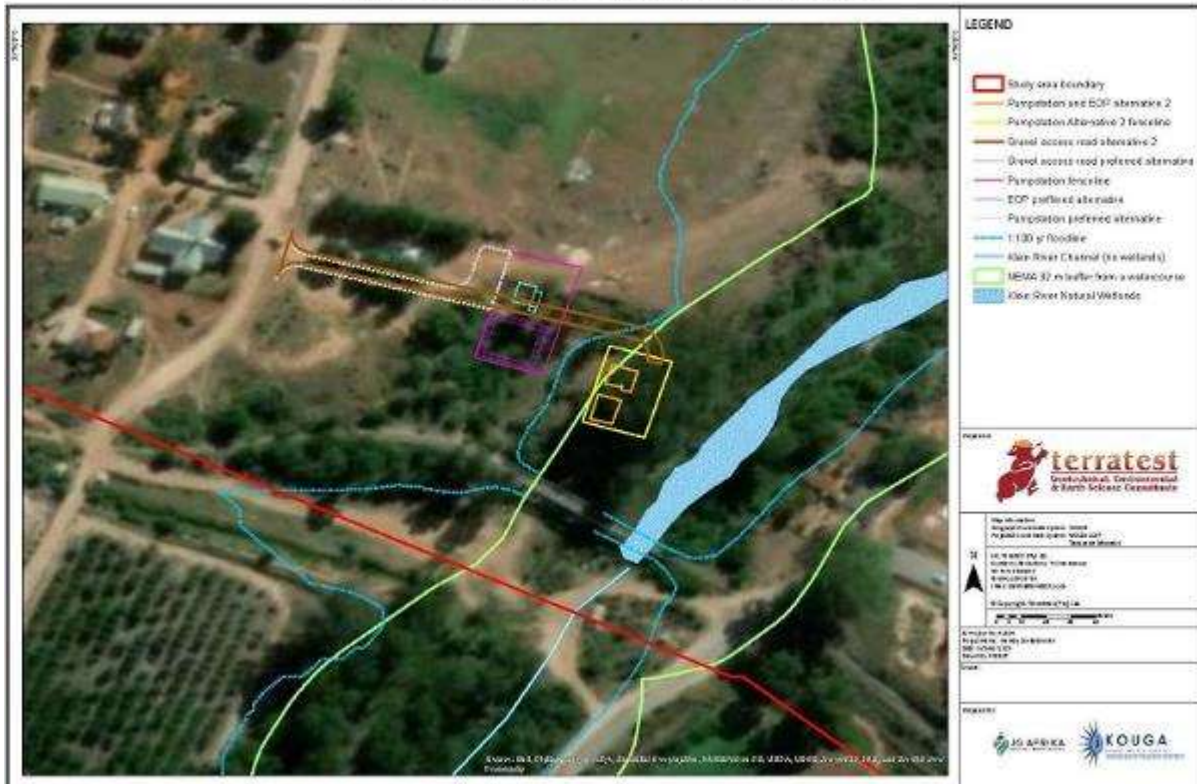


Map 1. 1:50 000 Topographic maps indicating the approximate location of the proposed upgrading and maintenance of the Hankey Sanitation System within the Kouga Local Municipality of the Eastern Cape Province.



Map 2. Aerial views of the location of the proposed site for the the construction of the pump station and detention pond that forms part of the upgrade and maintenance of the Hankey Sanitation System.

HANKEY SANITATION PROJECT: PUMPSTATION ALTERNATIVES

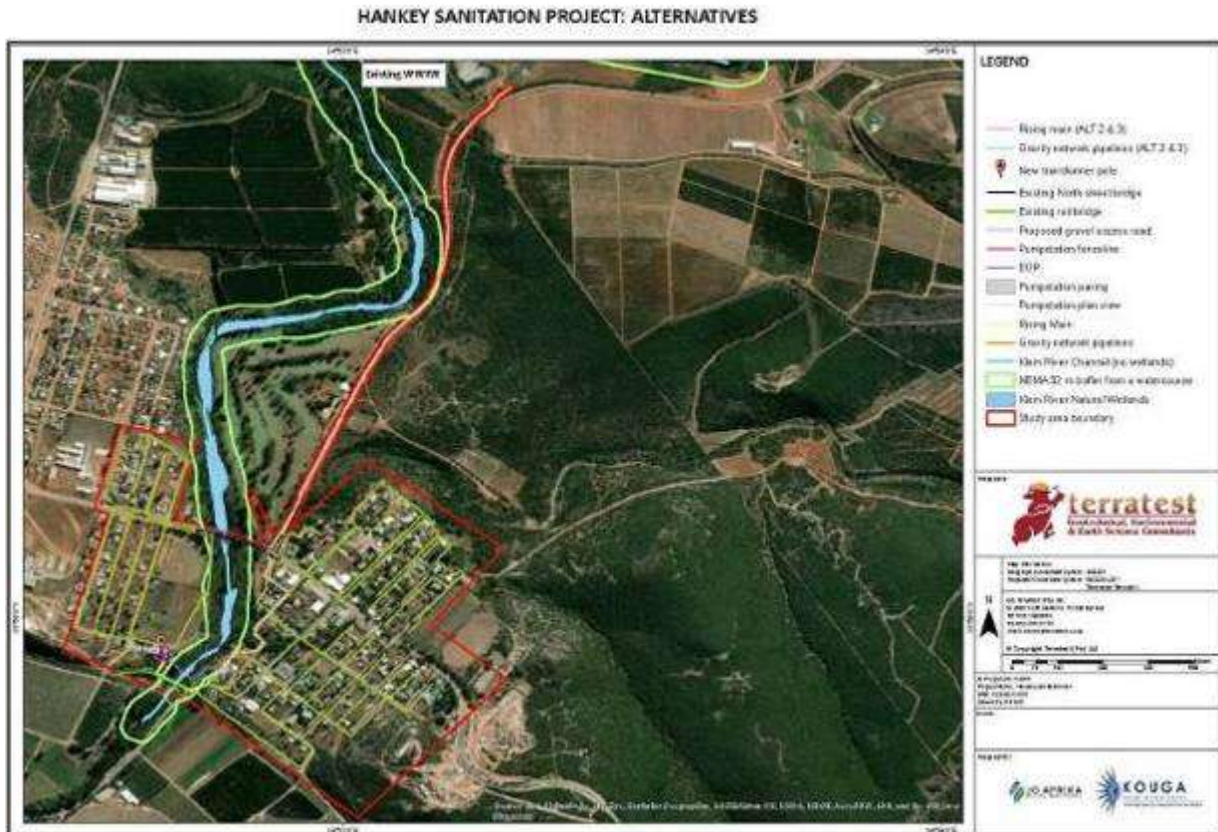


Map 3. Aerial views of the location and layout of the proposed sites for the the construction of the pump station and detention pond that forms part of the upgrade and maintenance of the Hankey Sanitation System. The preferred option is indicated by the purple square and the alternative option by the yellow square. The preferred access route is indicated by the white dotted lines and the alternative option by the brown lines. (Map courtesy of Terratest (Pty) Ltd.)

HANKEY SANITATION PROJECT: PREFERRED LAYOUT



Map 4. Aerial view of the preferred layout for the upgrade and maintenance of the Hankey Sanitation System. The study area is indicated in red (Map courtesy of Terratest (Pty) Ltd.)



Map 5. Aerial view of the alternative layout for the upgrade and maintenance of the Hankey Sanitation System. The study area is indicated in red (Map courtesy of Terratest (Pty) Ltd.)



Map 6. Aerial view of the location of the preferred option of the sewer pipeline crossing the Klein River by installing the pipeline on the existing “Narrow Gauge” Steel Rail Bridge indicated in yellow. The pipeline is indicated by the light brown lines. The access road is indicated by the dark brown lines (also see Map 3) and the pump station and detention pond by the white squares.



Map 7. Aerial views of the location of alternative option 2 (red line) and alternative option 3 (yellow line) for the sewer pipeline crossing the Klein River



Map 8. Aerial views of some of the historical features in close proximity to the pump station, detention pond and river crossings that forms part of the proposed Hankey Sanitation System. The proposed pump station area is indicated by the white square. Place mark “A” indicates the Congregational Church, place mark “B” and the yellow lines indicate the “Narrow Gauge” Steel Rail Bridge, place mark “C” indicates the “Victoria tree” and place mark “D” indicates the Philip Graves.