

# Heritage Statement

for

**Proposed Culvert Replacements, DR1633 km 3.35 and Site 8  
DR1602 km 8.5, Jonkersberg Area, Varings River, Mossel Bay  
Municipality, Garden Route District, Western Cape Province**

for

**Sharples Environmental Services cc**, Madeleine Knoetze and Jessica Gossman ,  
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[madeleine@sesc.net](mailto:madeleine@sesc.net) and [jessica@sesc.net](mailto:jessica@sesc.net)

by



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21 February 2024  
Revised with inputs on the 27<sup>th</sup> of February 2025

## Summary - Conclusions & Recommendations

The proposed activities involve replacing the existing causeway with a new causeway (Site 4) and the realignment of the road and building a new causeway (Site 8) at river crossings that were damaged by flooding in 2023. The causeways are less than 50 m in length and the maximum affected area for the temporary bypass roads is 60 m long and less than 300 m<sup>2</sup> in extent with approximately 118 m<sup>2</sup> extending beyond the road reserve. The temporary bypass roads will be removed after the completion of repair and construction works. The scope and nature of the proposed activities do not trigger the National Heritage Resources Act (Act 25 of 1999; NHRA) nor the requirement for a Notification of Intent to Develop (NID) application to Heritage Western Cape (HWC). It is also noted that the affected localities are in and immediately adjacent to road reserves, in existing high energy riverbeds and are already disturbed and transformed by transport infrastructure.

The following conclusions and recommendations are arrived at after reviewing information obtained through:

- The National Heritage Resources Act (Act 25 of 1999; NHRA),
- The appointed Environmental Assessment Practitioner (Sharples Environmental Services cc),
- SAHRIS Palaeo Map and inputs from palaeontologist Prof John Pether,
- maps and Google Earth aerial imagery, and
- a site inspection (archaeological/heritage walk-through).

Because the scope and nature of the proposed activities do not trigger the NHRA nor the requirement for a NID application to HWC, historical aerial photographs and SG Diagrams were not obtained, and a basic background investigation was not conducted. Palaeontological inputs were obtained at the request of the EAP and because the DFFE screening tool reports are not always based on current data.

Palaeontology: “In general, the high-energy cobble gravel deposits of small rivers are unfavourable for the deposition and preservation of animal remains. The acidic groundwaters draining off Cape mountains are unfavourable for bone preservation. In view of the evident lack of fossil bones in such deposits and the relatively low volume of affected deposits the palaeontological impact of the re-establishing of the causeway is LOW (Pether 2024, Pg. 1). “Although fossils finds are not anticipated, just in case it is recommended that the Heritage Western Cape Fossil Finds Procedure (HWC-FFP) is included in the Environmental Management Plan (EMP) for the construction earthworks, basically “If fossil bones are uncovered during excavations stop work at that spot and report to Heritage Western Cape”. The links to the HWC and the FFP are below” (Pether 2024, Pg. 2, Appendix A):

Heritage / Archaeology: although the road and causeways are likely older than 60 years, they were damaged by flooding in 2023 and there are no structural or architectural features of heritage value associated with the localities or transport infrastructure. No heritage resources were identified in the temporarily and permanently affected areas. Furthermore, the proposed activities do not trigger the NHRA and the locality is already disturbed and transformed by transport infrastructure, agricultural activities, and the high energy stream.

From an archaeological and palaeontological perspective, the activities will involve the disturbance or excavation of a relatively small area of previously undisturbed sediments (bar erosion of stream bed), and the temporary bypass will involve the importation of sediments

rather than excavation. It follows that there will be limited new impact resulting from the proposed activities.

On heritage grounds, due to the transformed nature of the sites and the absence of heritage resources or themes in and around Sites 4 and 8, the proposed repair and construction works will have negligible to zero impact on the visual or aesthetic heritage value of the area. The rural landscape already contains transport infrastructure, and the proposed repair and construction works will not alter the cultural landscape. The proposed repair and construction works will in no way alter the heritage value of the area. For the same reason there will be no cumulative impact on the heritage value of the area.

The positive socio-economic impact, including short-term jobs as well as the need for safe transport infrastructure outweigh the negligible to zero negative impacts this project may have on heritage resources.

Consequently, it is recommended that a Notification of Intent to Develop application to Heritage Western Cape is not required and that no further heritage studies, mitigation, or management measures are needed.

On heritage grounds it is recommended that the proposed activities may proceed in full and without limitations or conditions.

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## 1. Name, Bio-sketch and Declaration of Specialist

I, Peter Nilssen (PhD in archaeology, University of Cape Town, 2000), herewith confirm that I am a Professional member - in good standing - of the Association of Southern African Professional Archaeologists (ASAPA), including the Cultural Resource Management section of the same association since 1989 (ASAPA professional member # 097). I am an accredited Principal Investigator for archaeozoology (specialist analysis), coastal, shell midden and Stone Age archaeology; Field Director for Colonial Period archaeology; and Field Supervisor for Iron Age archaeology and Rock Art. I have worked as a professional archaeologist in Cultural Resource Management since 1989 and have completed more than 280 heritage-related impact assessments and mitigation projects as Principal Investigator.

As the appointed independent specialist (archaeologist) for this project hereby declare that I:

- act as an independent specialist in this application,
- regard the information contained in this report as it relates to my specialist input/study to be true and correct,
- do not have and will not have any financial interest in the undertaking of the activity, other than remuneration for work performed in terms of the NEMA, the Environmental Impact Assessment Regulations, 2014 and any specific environmental management Act,
- have and will not have no vested interest in the proposed activity proceeding,
- have disclosed, to the applicant, EAP and competent authority, any material information that have or may have the potential to influence the decision of the competent authority or the objectivity of any report, plan or document required in terms of the NEMA, the Environmental Impact Assessment Regulations, 2014 and any specific environmental management Act,
- am fully aware of and meet the responsibilities in terms of NEMA, the Environmental Impact Assessment Regulations, 2014 (specifically in terms of regulation 13 of GN No. R. 982) and any specific environmental management Act, and that failure to comply with these requirements may constitute and result in disqualification, and
- am aware that a false declaration is an offence in terms of regulation 48 of GN No. R. 982.



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Signature of the specialist:

Date: **21 February 2024**

## 2. Introduction & Background

Due to storm and flood damage, the Garden Route District Municipality proposes to repair roads and river crossings to ensure safe passage of vehicles. The environmental application, currently a Basic Assessment Report, is being facilitated by Madeleine Knoetze & Jessica Gossman of Sharples Environmental Services cc (hereafter SES) who compiled Screening Tool Reports for the project (Knoetze 2023a and 2023b). Because the proposed development footprint is less than 5000 m<sup>2</sup> in extent and the causeways (bridges) are less than 50 m in length, the National Heritage Resources Act (Act 25 of 1999, NHRA) is not triggered and a Notification of Intent to Develop (NID) application to Heritage Western Cape (HWC) is not required. Nevertheless, due to the DFFE Screening Tool Report results and through SES, the applicant appointed this author to provide a Heritage Statement regarding the NHRA and heritage resources.

This document is not a Heritage Impact Assessment, but rather, is a scoping report that provides supporting information for recommendations made here regarding heritage resources and the NHRA.

This Heritage Statement serves to inform the Environmental Application process with respect to heritage resources and the NHRA in connection with the proposed activities and to make recommendations regarding the potential impact on heritage resources and the requirement for any further specialist investigations.

## 3. Site Locations and Development Proposal

Sites 4 and 8 are situated on the Varings River some 30 km NNE of Mossel Bay and about 12 km NNE of Groot Brakrivier, Western Cape Province (Locality Map and Figures 1, 2 & 3). Property details are given in Tables 1 and 2 below.



Locality Map. General location of the study area (yellow markers) NNE of Mossel Bay, Western Cape Province. Courtesy of Google Earth 2022.

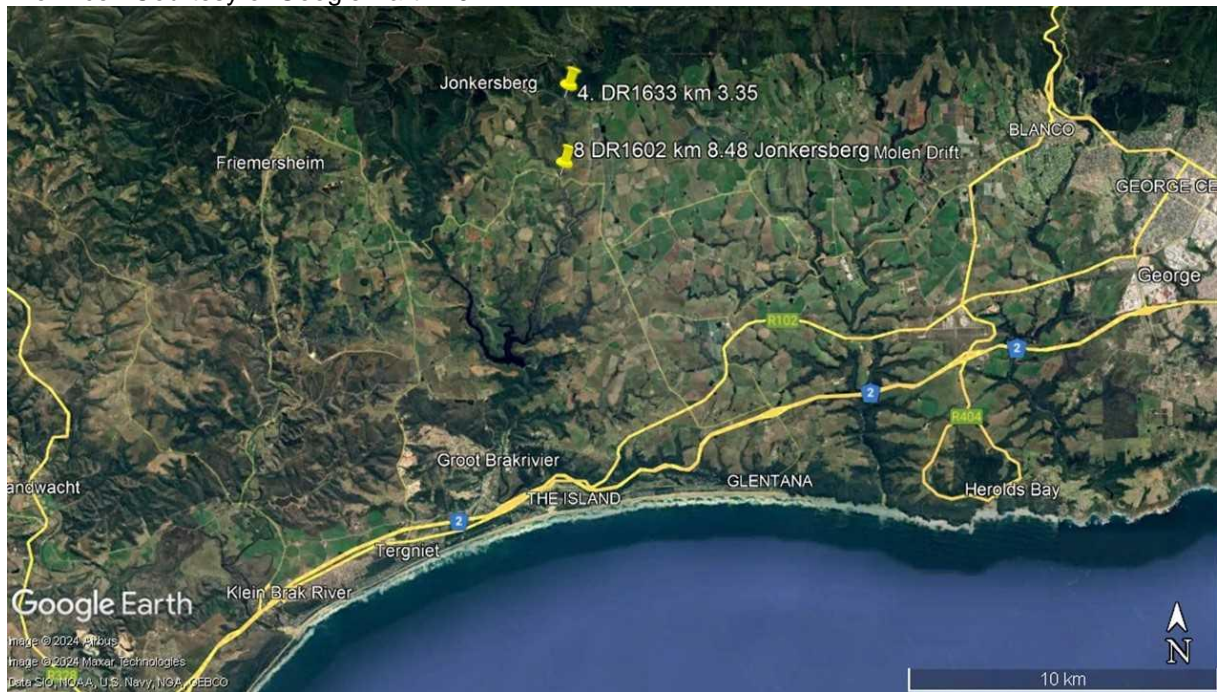


Figure 1. Enlarged from Locality Map showing Sites 4 & 8 (labelled yellow markers) relative to Groot Brakrivier and Friemersheim, Western Cape. Courtesy of Cape Google Earth 2022. (A4 version below)



Figure 2. Enlarged from Figure 1 showing Sites 4 & 8 (labelled yellow marker) in the Jonkersberg area, Western Cape. Courtesy of Cape Google Earth 2022. (A4 version below)

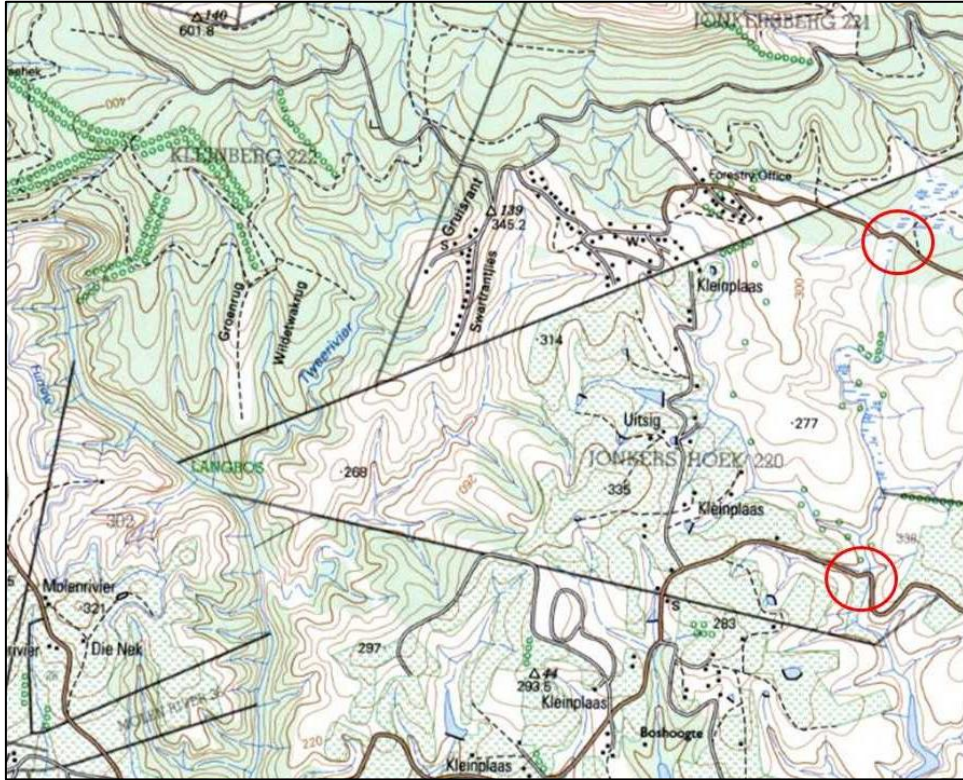


Figure 3. Enlarged portion of 1:50 000 topographic map 3322CC 1998 Jonkersberg, showing Site 4 (top red circle) and Site 8 (bottom red circle) relative to Jonkersberg, Western Cape Province. Courtesy of the Chief Directorate Surveys and Mapping, Mowbray. (A4 version below)

Table 1. Property details for Site 4 (Knoetze 2023a).

No	Farm Name	Farm/ Erf No	Portion	Latitude	Longitude	Property Type
1	HARTEBEEST KUIL	220	0	33°56'49.03S	22°14'9.48E	Farm
2	HARTEBEEST KUIL	220	4	33°56'19.55S	22°14'37.6E	Farm Portion
3	HARTEBEEST KUIL	220	7	33°56'45.31S	22°14'23.98E	Farm Portion

Table 2. Property details for Site 8 (Knoetze 2023b).

No	Farm Name	Farm/ Erf No	Portion	Latitude	Longitude	Property Type
1	ERFPAG	338	0	33°57'31.79S	22°14'53.13E	Farm
2	ERFPAG	338	0	33°57'31.79S	22°14'53.13E	Farm Portion

**Site 4** - The proposed repair works will “Replace existing causeway with new but much bigger openings; provide inlet and outlet apron slab and wing walls - temporary deviation road upstream. The bypass will be 4 m wide and 45 m long. The information suggests that the bypass extend approximately 2.5 m over the road reserve, which represents an area of approximately 80 m<sup>2</sup>“(from SES).

**Site 8** - The proposed repair works will “Remove Causeway, realign road and provide new causeway outside the current road reserve - Replace existing causeway with new but much bigger openings; provide inlet and outlet apron slab and wing walls - temporary deviation road upstream. The bypass will be 4 m wide and 60 m long. The information suggests that the

bypass extend approximately 2.5 m over the road reserve, which represents an area of approximately 118 m<sup>2</sup>. "(from SES).

From an archaeological and palaeontological perspective, the activities will involve the disturbance or excavation of a relatively small area of previously undisturbed sediments (bar erosion of stream bed), and the temporary bypass will involve the importation of sediments rather than excavation. It follows that there will be limited new impact resulting from the proposed activities.

#### **4. Study Area**

Sites 4 and 8 are within and immediately adjacent to road reserves and within the high energy stream bed of the Varings River. The area was previously disturbed by the construction of roads and causeways as well as by water erosion and damage during flooding. The reason for the proposed activities is to repair and replace the roads and causeways that were damaged during the 2023 floods. The immediate surroundings are overgrown and partially disturbed by agricultural activities. Examples of Sites 4 and 8, damage to transport infrastructure, and the immediate surroundings are shown in Figures 4 through 7.



Figure 4. Site 4 and immediate surroundings viewed from the East (top) and viewed from the West (bottom).



Figure 5. Site 4 - showing the causeway, flood damage, and immediate surroundings viewed from the West (top) and viewed from the East (bottom).



Figure 6. Site 8 and immediate surroundings viewed from the East (top) and viewed from the West (bottom).



Figure 7. Site 8 - showing the causeway and damage.

## **5. Background Information, Previous Heritage Studies & Heritage Resources**

Because the proposed activity does not trigger the NHRA, and a NID application to HWC is not required, a basic background heritage investigation is not warranted for the project. Nevertheless, inputs from palaeontologist, Prof John Pether, are given below (Appendix A).

### **Palaeontology**

A DFFE screening tool report was obtained by SES as part of the initial stages of the environmental application process and palaeontology was attributed with a LOW sensitivity rating for Site 4 while there is no sensitivity rating for Site 8 (Knoetze & Gossman 2023a & 2023b).

The SAHRIS Palaeo Map shades Site 4 blue (LOW sensitivity) and indicates that a desktop study is not required, but that a fossil finds procedure is required. Site 8 is clear (unclassified) in the SAHRIS Palaeo Map. Consequently, Prof Pether was consulted for professional inputs (Pether 2024).

Prof Pether's full report is presented below in Appendix A, and he concludes as follows: "In general the high-energy cobble gravel deposits of small rivers are unfavourable for the deposition and preservation of animal remains. The acidic groundwaters draining off Cape mountains are unfavourable for bone preservation. In view of the evident lack of fossil bones in such deposits and the relatively low volume of affected deposits the palaeontological impact of the re-establishing of the causeway is LOW" (Pether 2024, Pg. 1).

"Although fossils finds are not anticipated, just in case it is recommended that the Heritage Western Cape Fossil Finds Procedure (HWC-FFP) is included in the Environmental Management Plan (EMP) for the construction earthworks, basically "If fossil bones are uncovered during excavations stop work at that spot and report to Heritage Western Cape". The links to the HWC and the FFP are below" (Appendix A, Pether 2024, Pg. 2).

### **Archaeology & Cultural Heritage**

The DFFE screening tool map and table for the archaeological and cultural heritage theme sensitivity indicates that the proposed development footprints of Site 4 and Site 8 falls within areas of LOW sensitivity (Knoetze 2023a & 2023b)).

A cursory desktop study indicated that no heritage-related studies were conducted at Site 4 or Site 8 or in the immediate surroundings, and a site inspection by this author revealed that no archaeological or cultural heritage resources of significance occur within the affected areas. Also note that the affected area is already disturbed and transformed by transport infrastructure and agricultural activities. Consequently, in agreement with the DFFE screening tool report, the proposed development footprint areas of Sites 4 and 8 are of LOW sensitivity concerning the archaeological and cultural heritage theme.

Because the proposed activities do not trigger the NHRA nor the need for NID applications to HWC, a detailed desktop study and literature review are beyond the scope of this report.

## **6. SG Diagrams, Historic Aerial Photographs and Results of Site Inspection**

Because the proposed activities do not trigger the NHRA nor the need for a NID application to HWC, historic aerial photographs were not obtained or consulted for this report. A cursory examination of the 1880 – 1890 SG mapping of Oudtshoorn shows an old road at Site 4, but

no other heritage-related structures or features are indicated at either of the sites nor in their immediate surroundings (Figure 8). Given the above, no information pertaining to colonial period ownership and land use of Sites 4 and 8 are presented here as the affected areas have been road reserves for some time.

Google Earth “historic” imagery was carefully examined for indications and traces of heritage resources such as built structures, roads, features, and evidence for other human-related impacts. No heritage resources of significance were identified within the affected areas of Sites 4 and 8.

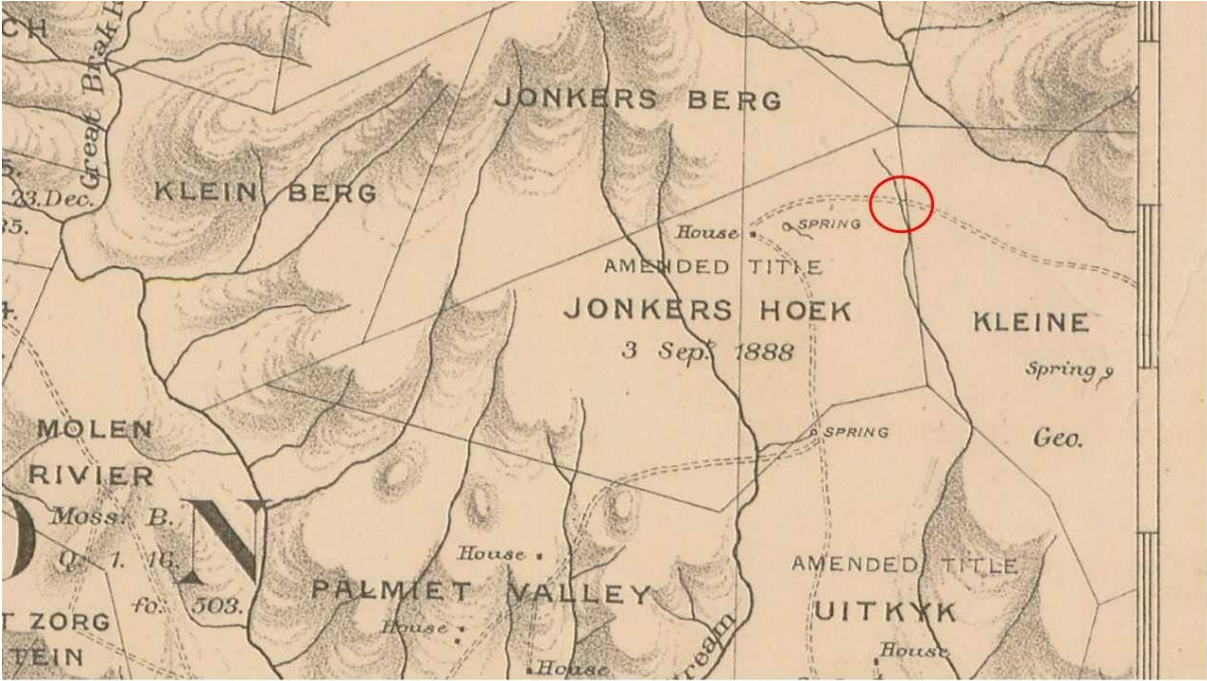


Figure 8. Enlarged portion of Oudtshoorn Map 1880-1890 (NGSI - DALRR) showing Site 4 with red circle. Note old road at Site 4.

An independent site inspection of Sites 4 and 8 was conducted on 8 February 2024 by means of a foot survey that covered the footprints of the proposed activities. Archaeological visibility was moderate to good and adequate for the purpose of this report. Examples of the studied area are shown above in Figures 4 through 7.

Survey tracks and observations were fixed with a handheld Garmin Etrex 30x GPS to record the investigated areas (Figures 9 and 10). A high quality, comprehensive digital photographic record was made with a DooGee S86 mobile phone, including location data for photographs. All GPS and photographic data are available on request.

The affected area was examined with a focus on the potential impact of the proposed repair works on heritage related resources of both colonial and pre-colonial origin. Heritage resources listed in Section E of the HWC NID application form were considered but are not listed here unless they are present on or in the immediate vicinity of the development footprint, or if they are anticipated to occur on or in the immediate vicinity of the property.

Due to the previously disturbed and transformed nature of the study area, the fact that the vast bulk of structural and surface sediments are imported, ongoing human-related activities, damage due to flooding, as well as inspection of the affected area and exposed surfaces,

adequate observations and information are available for this report and recommendations made herein.

Notwithstanding the substantially transformed status of Sites 4 and 8, the approach was:

- to evaluate the visual / aesthetic sensitivity of the area, and
- to inspect the footprint of the proposed activity to gain an understanding of its archaeological / heritage content and context.



Figure 9. Site 4 (yellow marker and white rectangle) with GPS-fixed survey tracks (red lines). (A4 version below).



Figure 10. Site 8 (yellow marker and white rectangle) with GPS-fixed survey tracks (red lines). (A4 version below).

The road and causeway at Site 4 is certainly older than 60 years (Figure 8) while those at Site 8 are likely older than 60 years, but neither have any structural features of heritage value. Given the existing transport infrastructure at both sites, any archaeological or palaeontological resources that may have occurred in the affected area are disturbed by human-related activities, imported sediments, and damage from water erosion. No archaeological or heritage resources of colonial or pre-colonial origin were identified within the study area or in its immediate vicinity. No fossil-bearing sediments were seen.

On heritage grounds, due to the transformed nature of the sites and the absence of heritage resources or themes in and around Sites 4 and 8, the proposed repair and construction works will have negligible to zero impact on the visual or aesthetic heritage value of the area. The rural landscape already contains transport infrastructure, and the proposed repair and construction works will not alter the cultural landscape. The proposed repair and construction works will in no way alter the heritage value of the area. For the same reason there will be no cumulative impact on the heritage value of the area.

## 7. Conclusions and Recommendations

The proposed activities involve replacing the existing causeway with a new causeway (Site 4) and the realignment of the road and building a new causeway (Site 8) at river crossings that were damaged by flooding in 2021. The causeways are less than 50 m in length and the maximum affected area for the temporary bypass roads is 60 m long and less than 300 m<sup>2</sup> in extent with approximately 118 m<sup>2</sup> extending beyond the road reserve. The temporary bypass roads will be removed after the completion of repair and construction works. The scope and nature of the proposed activities do not trigger the National Heritage Resources Act (Act 25 of 1999; NHRA) nor the requirement for a Notification of Intent to Develop (NID) application to Heritage Western Cape (HWC). It is also noted that the affected localities are in and immediately adjacent to road reserves, in existing high energy riverbeds and are already disturbed and transformed by transport (road and river crossing) infrastructure.

The following conclusions and recommendations are arrived at after reviewing information obtained through:

- The National Heritage Resources Act (Act 25 of 1999; NHRA),
- The appointed Environmental Assessment Practitioner (Sharples Environmental Services cc),
- SAHRIS Palaeo Map and inputs from palaeontologist Prof John Pether,
- maps and Google Earth aerial imagery, and
- a site inspection (archaeological/heritage walk-through).

Because the scope and nature of the proposed activities do not trigger the NHRA nor the requirement for a NID application to HWC, historical aerial photographs and SG Diagrams were not obtained, and a basic background investigation was not conducted. Palaeontological inputs were obtained at the request of the EAP and because the DFFE screening tool reports are not always based on current data.

Palaeontology: "In general, the high-energy cobble gravel deposits of small rivers are unfavourable for the deposition and preservation of animal remains. The acidic groundwaters draining off Cape mountains are unfavourable for bone preservation. In view of the evident lack of fossil bones in such deposits and the relatively low volume of affected deposits the palaeontological impact of the re-establishing of the causeway is LOW (Pether 2024, Pg. 1).

“Although fossils finds are not anticipated, just in case it is recommended that the Heritage Western Cape Fossil Finds Procedure (HWC-FFP) is included in the Environmental Management Plan (EMP) for the construction earthworks, basically “If fossil bones are uncovered during excavations stop work at that spot and report to Heritage Western Cape”. The links to the HWC and the FFP are below” (Pether 2024, Pg. 2, Appendix A):

Heritage / Archaeology: although the road and causeways are likely older than 60 years, they were damaged by flooding in 2023 and there are no structural or architectural features of heritage value associated with the localities or transport infrastructure. No heritage resources were identified in the temporarily and permanently affected areas. Furthermore, the proposed activities do not trigger the NHRA and the locality is already disturbed and transformed by transport infrastructure, agricultural activities, and the high energy stream.

From an archaeological and palaeontological perspective, the activities will involve the disturbance or excavation of a relatively small area of previously undisturbed sediments (bar erosion of stream bed), and the temporary bypass will involve the importation of sediments rather than excavation. It follows that there will be limited new impact resulting from the proposed activities.

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The positive socio-economic impact, including short-term jobs as well as the need for safe transport infrastructure outweigh the negligible to zero negative impacts this project may have on heritage resources.

Consequently, it is recommended that a Notification of Intent to Develop application to Heritage Western Cape is not required and that no further heritage studies, mitigation, or management measures are needed.

On heritage grounds it is recommended that the proposed activities may proceed in full and without limitations or conditions.

## **8. References & Bibliography**

Heritage Western Cape (HWC), 2021a. Notification of Intent to Develop, Heritage Impact Assessment, (Pre-Application) Basic Assessment Reports, Scoping Reports and Environmental Impact Assessments, Guidelines for Submission to Heritage Western Cape.

Heritage Western Cape (HWC), 2021b. Guide for Minimum Standards for Archaeology and Palaeontology Reports Submitted to Heritage Western Cape.

Pether, J, 2024. Brief Palaeontological Impact Statement, New Causeways — Varingsrivier — Site 4 DR1633 km 3.35 & Site 8 DR1602 km 8.5, Jonkersberg Area, Mossel Bay Municipality, Garden Route District, Western Cape.

Knoetze, M. 2023a. Screening Report for an Environmental Authorization as Required by the 2014 EIA Regulations – Proposed Site Environmental Sensitivity, Proposed Culvert Replacements, Site 4, Western Cape Government, Dept of Transport and Public Works, Western Cape Province.

Knoetze, M. 2023b. Screening Report for an Environmental Authorization as Required by the 2014 EIA Regulations – Proposed Site Environmental Sensitivity, Proposed Culvert Replacements, Site 8, Western Cape Government, Dept of Transport and Public Works, Western Cape Province.

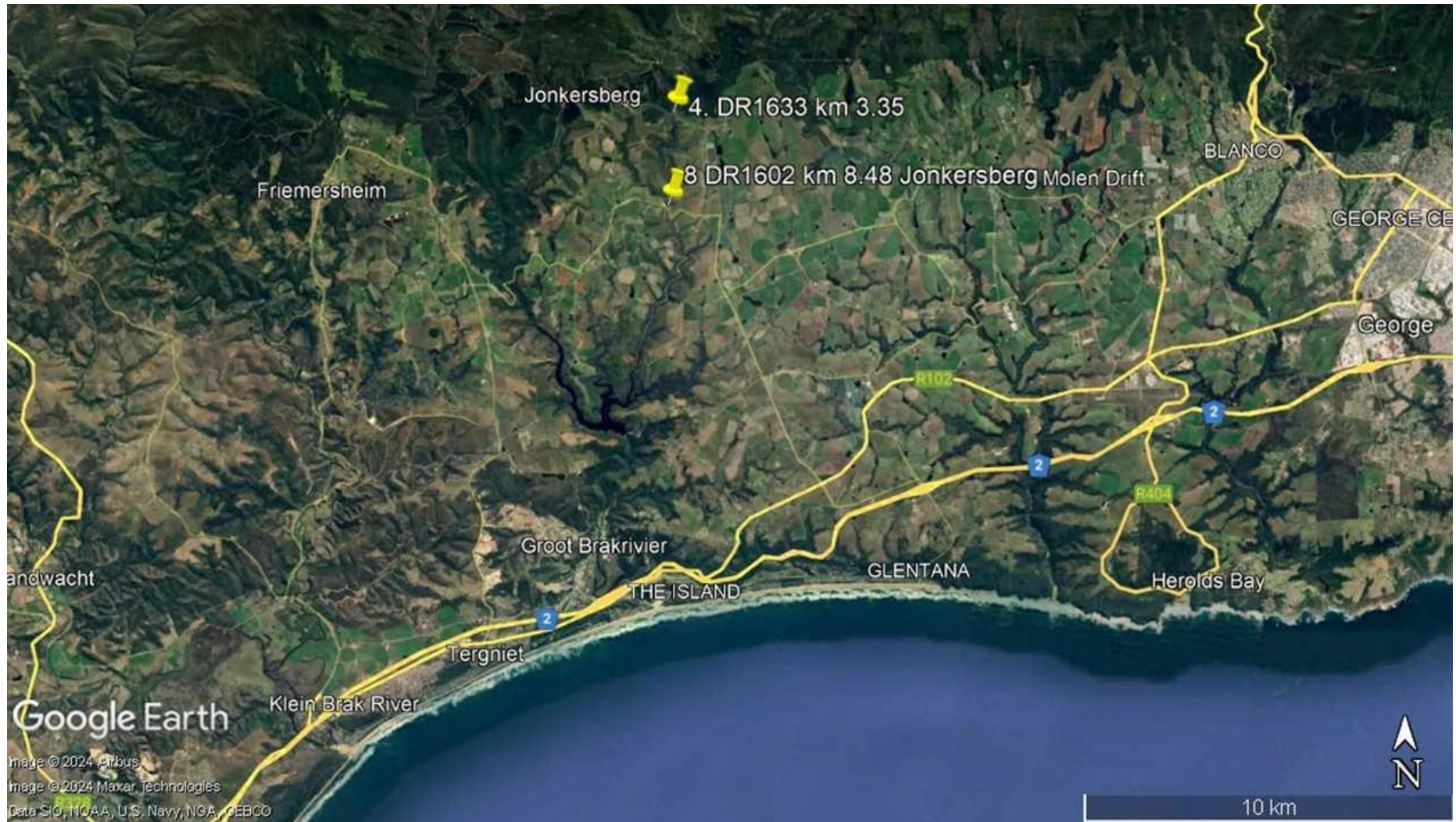


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Figure 2. Enlarged from Figure 1 showing Sites 4 & 8 (labelled yellow marker) in the Jonkersberg area, Western Cape. Courtesy of Cape Google Earth 2022.

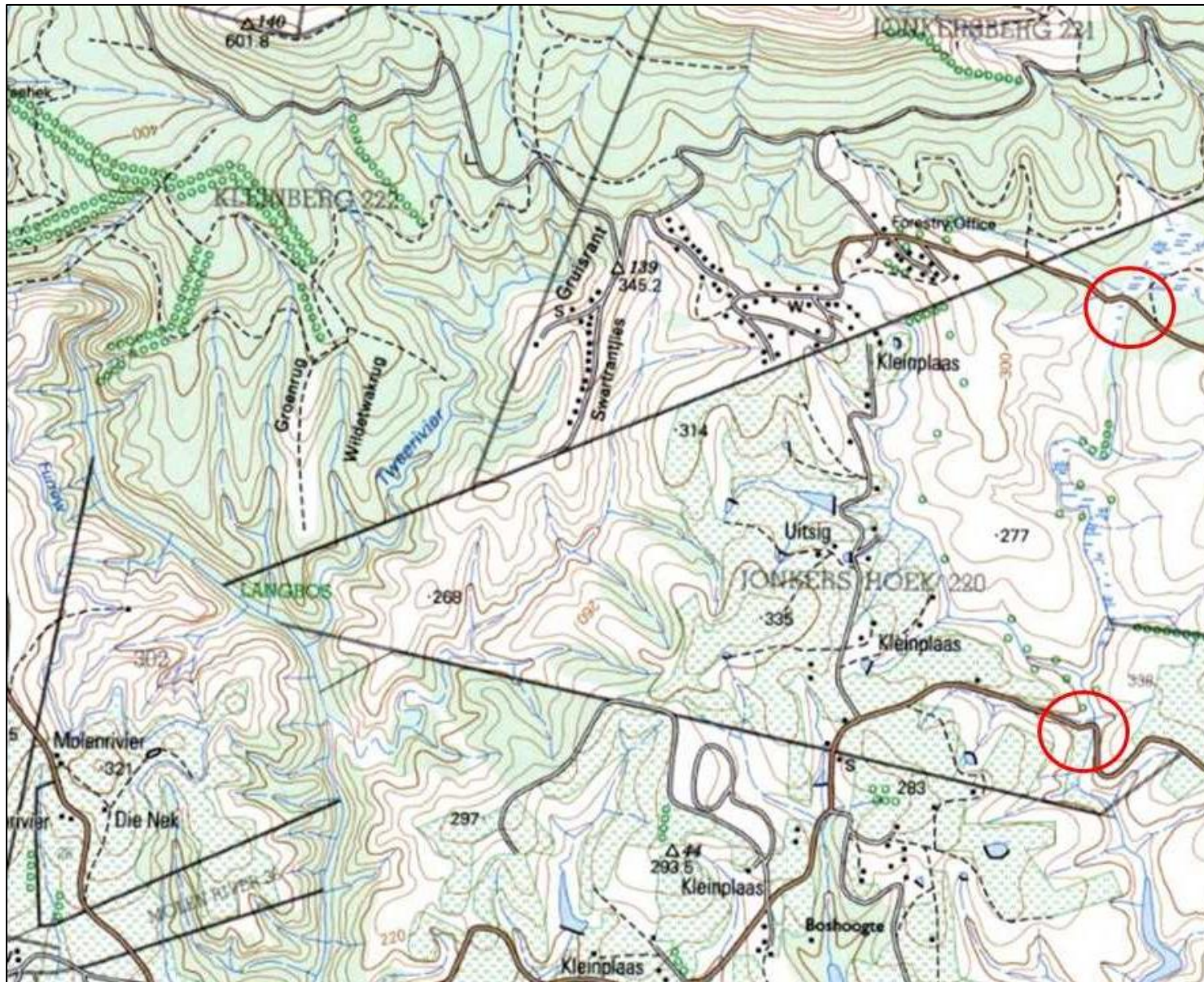


Figure 3. Enlarged portion of 1:50 000 topographic map 3322CC 1998 Jonkersberg, showing Site 4 (top red circle) and Site 8 (bottom red circle) relative to Jonkersberg, Western Cape Province. Courtesy of the Chief Directorate Surveys and Mapping, Mowbray.



Figure 9. Site 4 (yellow marker and white rectangle) with GPS-fixed survey tracks (red lines).



Figure 10. Site 8 (yellow marker and white rectangle) with GPS-fixed survey tracks (red lines).

## Appendix A:

John Pether, M.Sc., Pr. Sci. Nat. (Earth Science), Ass. Prof. Herit. Practs.- W. Cape

Geological and Palaeontological Consultant

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16 February 2024

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### BRIEF PALAEOLOGICAL IMPACT STATEMENT

NEW CAUSEWAYS – VARINGSRIVIER – SITE 4 DR1633 km 3.35 & SITE 8 DR1602 km 8.5

Jonkersberg Area, Mossel Bay Municipality, Garden Route District, Western Cape

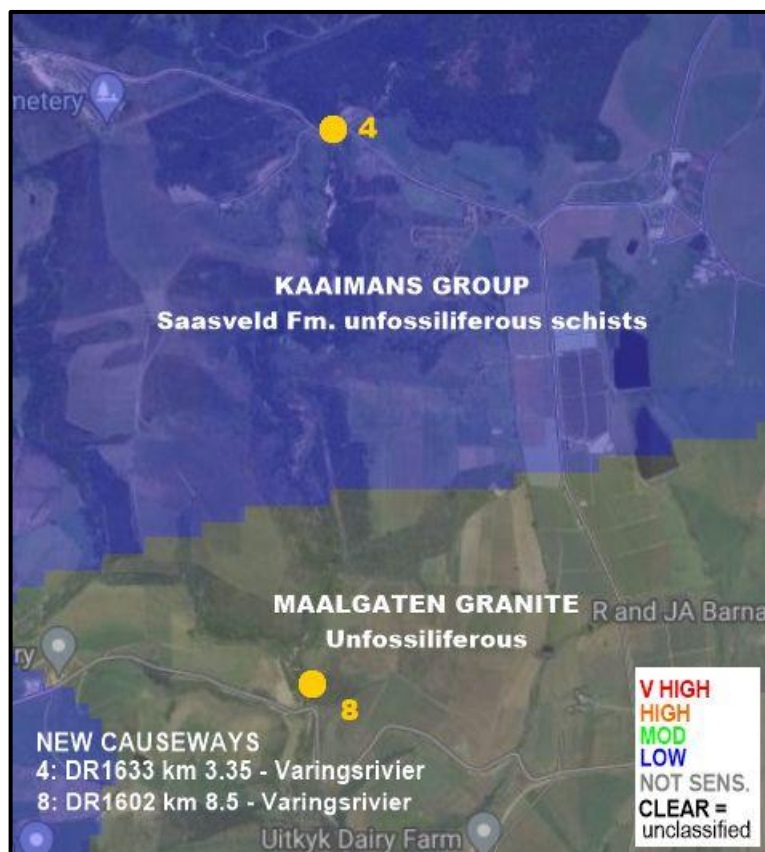


Figure 1. Annotated SAHRIS Palaeontological Sensitivity Map.

The bedrock at Site 4 is unfossiliferous, highly deformed and foliated schist of the Kaaimans Group. The bedrock at Site 8 is unfossiliferous granite (Figure 1).

At the scale of the geological map (1:250 000 3322 OUDTSHOORN – CGS) the minor alluvial deposits along the course of the Varingsrivier are not depicted, but the default SAHRIS palaeontological sensitivity rating for alluvial deposits is Moderate/Green.

Valuable fossils have been found in alluvial deposits of different ages, most notably in valley-flank terraces preserving parts of ancient floodplains, such as along the major Vaal and Orange rivers where rare fossil bones were uncovered during extensive alluvial diamond mining. However, the fossil potential of alluvium is very variable, depending on the type or palaeo-environment of the river deposits. In general the high-energy cobble gravel deposits of small rivers are unfavourable for the deposition and preservation of animal remains. The acidic groundwaters draining off Cape mountains are unfavourable for bone preservation.

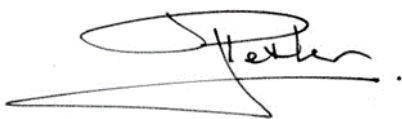
In view of the evident lack of fossil bones in such deposits and the relatively low volume of affected deposits the palaeontological impact of the re-establishing of the causeways is LOW.

Although fossils finds are not anticipated, just in case it is recommended that the Heritage Western Cape Fossil Finds Procedure (HWC-FFP) is included in the Environmental Management Plan (EMP) for the construction earthworks, basically “If fossil bones are uncovered during excavations stop work at the spot and report to Heritage Western Cape”. The links to the HWC and the FFP are below:

[https://www.hwc.org.za/sites/default/files/3\\_11%20Protocol%20Fossil%20Finds%20Final%20June%202016.pdf](https://www.hwc.org.za/sites/default/files/3_11%20Protocol%20Fossil%20Finds%20Final%20June%202016.pdf)

HWC: 021 483 9729

Heritage Western Cape will assess the information and liaise with an archaeological or palaeontological specialist, as appropriate.

A handwritten signature in black ink, appearing to read 'John Pether', with a large, stylized flourish underneath.

John Pether