

1st April 2026

Ms Femke de Wet
Zwartkops Conservancy
Gqeberha
6006

Dear Ms de Wet

SWARTKOPS RIVER WATER SAMPLING – MARCH 2026

Thank you for affording us the opportunity to assist you with your Environmental Management program for the Zwartkops Conservancy in Gqeberha. The results of the survey are below.

If any further information is required, please feel free to contact me.

Thanking you



Ms Vanessa Lessing

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INFORMATION PAGE

CLIENT NAME	Zwartkops Conservancy	
PHYSICAL ADDRESS	Zwartkops Conservancy, Gqeberha	
CONTACT	Ms de Wet	
TYPE OF SERVICE	Water Sampling for <i>Enterococci</i>	
DATE OF SERVICE	26 March 2026	
REPORT NUMBER	FI88-M2	
REVISION NUMBER	01	
AUDIT CONDUCTED AND REPORT COMPILED BY	Ms Vanessa Lessing	<i>Lessing</i>
TECHNICAL REVIEW	Dr Brett Williams	<i>Williams</i>

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EXECUTIVE SUMMARY

Zwartkops Conservancy requested Future Impact (Pty) Ltd to conduct water monitoring of *Enterococci* levels in the Swartkops Estuary. The purpose of this study was to assess the presence and concentration of *Enterococci* bacteria, which are commonly used as indicators of faecal contamination in estuarine and marine environments.

This report evaluates measurements and observations made at site under the conditions, which prevailed on the date of the survey. Results and recommendations, made without prejudice, are contained in this report.

The *Enterococci* concentration measured at Corobrik exceeded the South African Recreational Water Quality guideline threshold indicating an **unacceptable microbiological health risk** at the time of sampling. The *Enterococci* concentration at Perseverance Causeway (128 counts/100 mL) was below the 185 counts/100 mL guideline threshold, indicating a **fair** microbiological health risk at the time of sampling. All other sampling points recorded *Enterococci* concentrations below the 100 counts/100 mL guideline and are therefore classified as excellent microbiological water quality status at the time of sampling.

Assuring you of our best attention at all times.

Thanking you



Ms Vanessa Lessing



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ABBREVIATIONS

CFU	colony-forming units
Words in the singular include the plural and vice versa, any gender includes the other genders, and any natural person includes a juristic person.	



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WATER MONITORING FOR ENTEROCOCCI

1.0 INTRODUCTION

Zwartkops Conservancy requested Future Impact (Pty) Ltd to conduct water monitoring of *Enterococci* levels in the Swartkops Estuary. The purpose of this study was to assess the presence and concentration of *Enterococci* bacteria, which are commonly used as indicators of faecal contamination in estuarine and marine environments.

Enterococci are bacteria commonly found in the intestines of humans and warm-blooded animals. While generally harmless within the gastrointestinal tract, their presence in environmental waters serves as a reliable indicator of faecal contamination.

2.0 STATUTORY REQUIREMENTS / STANDARD USED

South African Water Quality Guidelines for Coastal Marine Waters, Volume 2. Guidelines for Recreational Use (2012).

Table 1. Risk-based ranges for intestinal enterococci for recreational waters in the Coastal Marine Environment

Risk Category	Enterococci (Count per 100ml)
Excellent	≤ 100 (95 percentile)
Good	≤ 200 (95 percentile)
Sufficient or Fair (minimum requirement)	≤ 185 (90 percentile)
Poor (unacceptable)	>185 (90 percentile)

3.0 METHODOLOGY

100 mL water samples were collected on the **26th of March 2026** from each designated sampling point to assess the presence of *Enterococci* bacteria. Sterile sampling bottles provided by the National Health Laboratory Service in



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Gqeberha, were used for all collections. Each sample was labelled with a unique sampling point identification number to ensure traceability. Samples were placed on ice after collection to minimize bacterial growth and preserve integrity. All samples were transported to the National Health Laboratory Service on the same day it was collected to ensure suitability for microbiological analysis.

The 100 mL water sample from each sampling point was filtered through a sterile membrane filter to capture bacteria present in the water. The filter was then placed onto *Enterococci*-specific agar plates and incubated for two days under controlled laboratory conditions to allow colony growth. After incubation, colonies exhibiting characteristic *Enterococci* morphology were identified using a microscope, and the number of colonies was recorded as colony-forming units per 100 mL (CFU/100 mL) to quantify enterococci levels in the samples.

The results were evaluated against the Risk-based ranges provided in South African Water Quality Guidelines for Coastal Marine Waters (2012).

4.0 SAMPLING LOCATIONS

The locations of the sampling points are illustrated in Figure 1 and Figure 2.



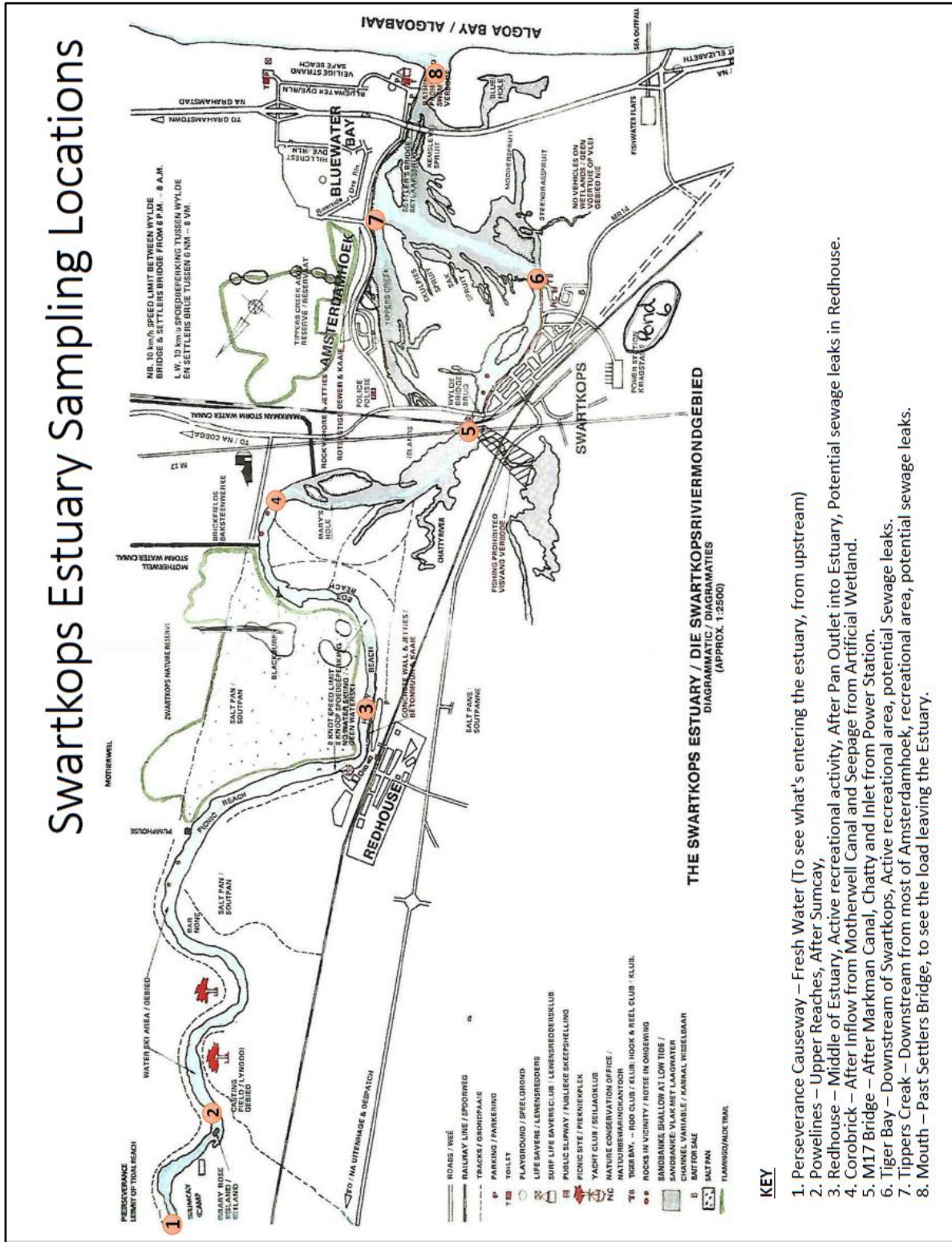


Figure 1. Sampling points



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Figure 2. Sampling points as shown on Google Earth image



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5.0 RESULTS

The Enterococci concentrations were evaluated in accordance with the risk-based classification ranges provided in Table 1. The results and corresponding risk categories are contained in the Table 2.

Table 2. Results

Sampling Point ID	Sample Position	Date/Time of sampling	Lab Report No.	Results Enterococci count per 100ml	SA Water Quality Guidelines (Coastal Marine) Risk Category
ZF26-1	Perseverance Causeway	26 March 2026 14h20	UH02993646	128	Good
ZF26-2	Powerlines	26 March 2026 14h20	UH02993649	35	Excellent
ZF26-3	Redhouse	26 March 2026 14h20	UH02993655	37	Excellent
ZF26-4	Corobrik	26 March 2026 14h20	UH02993658	Innumerable	Poor (unacceptable)
ZF26-5	M17 Bridge	26 March 2026 14h20	UH02993661	26	Excellent
ZF26-6	Tiger bay	26 March 2026 14h20	UH02993664	18	Excellent
ZF26-7	Tippers Creek	26 March 2026 14h20	UH02993666	2	Excellent
ZF26-8	Swartkops River Mouth	26 March 2026 14h20	UH02993668	6	Excellent

6.0 DISCUSSION

The *Enterococci* concentration measured at Corobrik exceeded the South African Recreational Water Quality guideline threshold indicating an **unacceptable microbiological health risk** at the time of sampling.



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The *Enterococci* concentration at Perseverance Causeway (128 counts/100 mL) was below the 185 counts/100 mL guideline threshold, indicating a **fair** microbiological health risk at the time of sampling.

All other sampling points recorded *Enterococci* concentrations below the 100 counts/100 mL guideline and are therefore classified as excellent microbiological water quality status at the time of sampling.

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