12 December 2025

2025/26 Water and Wastewater Treatment Network Review – Swellendam

Final Internal Audit Report

Swellendam Municipality
Internal Audit Services

Audit Ref. 2025/26-008

A. Petersen
SENIOR INTERNAL AUDITOR
(SWELLENDAM MUNICIPALITY)

This Engagement Conforms with the International Standards for the Professional Practice of Internal Auditing.

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Audit Ref No **2025/26-008**

Mr. W. Treurnicht
Acting Director: Infrastructure Services
Swellendam Municipality

Dear Mr. Treurnicht

We have the pleasure of submitting our final audit report, presenting internal audit findings and recommendations, and contributing to the maturity of the control framework to increase business efficiency and effectiveness.

The results of the audit, which are presented to management, are aimed at providing assurance that risk treatments covered in the audit are adequate and effective in contributing to the management of the risks impacting management's objectives.

Please take note that this report has been prepared solely for the management of Swellendam Municipality. We do not accept any responsibility to any third party to whom the contents may be disclosed or who at their own accord, may decide to rely on it, as the report has not been prepared for, and is not intended for, any other purpose.

We would like to express our appreciation for the inputs and assistance from Management, and would be pleased to provide you with any further assistance and requests that you have. Please do not hesitate to contact Mr. A Petersen.

INDEPENDENCE

The Internal Audit Function of the Swellendam Municipality certifies that we are, in all respects, independent, and seen as being independent, with regard to the auditing of the Water and Wastewater Treatment Plants situated in Swellendam.

Yours sincerely,

MR. A. PETERSEN
SENIOR INTERNAL AUDITOR
DATE: 12 DECEMBER 2025

1. EXECUTIVE SUMMARY

1.1 INTRODUCTION

In accordance with the approved 2025/26 Risk-Based Internal Audit Three-year Strategic Plan, the Internal Audit function was required to conduct an audit engagement focusing on the Water and Wastewater Treatment Plants within the Swellendam region. The engagement required to provide independent assurance to management and Council on the adequacy and effectiveness of internal controls governing the Water and Wastewater treatment network's operations located in Swellendam. A physical site inspection was performed on 18 November 2025 at both the Water and Wastewater Treatment Networks in Swellendam to obtain a comprehensive understanding of the processes, controls, and operational environment. On a quarterly basis, the other plants outside Swellendam will be visited.

1.2 BACKGROUND INFORMATION

The Water and Waste Water Treatment Network falls under the Infrastructure Services Directorate, specifically the Water Services Department. The department is responsible for ensuring that both plants operate efficiently and deliver reliable, compliant water and sanitation services to the community. Given the critical role these facilities play in public health, environmental protection, and sustainable municipal service delivery, effective control measures and operational oversight are essential.

1.3 PURPOSE, SCOPE, AND APPROACH

The purpose of this review was to evaluate the adequacy and effectiveness of existing controls and provide reasonable assurance that the internal controls governing the Water and Wastewater Treatment Networks processes are adequate, appropriate, and operating effectively and efficiently in the Swellendam region.

Our scope will include:

The review will cover the period 01 July 2025 – 30 September 2025 and be based on the objectives outlined below. In addition, the review assessed the design and operational effectiveness of internal controls.

Our approach will include

- Reviewing and evaluating the general internal controls implemented at the Water and Wastewater Treatment Network plants in Swellendam;
- Reviewing and assessing whether plant equipment was calibrated/serviced, and maintained in accordance with approved maintenance schedules;
- Reviewing the health and safety compliance with environmental and safety regulations applicable to the Water and Wastewater Treatment operations in Swellendam;
- Determine whether municipal officials assigned to these facilities possess the requisite human resource and technical skills capacity to operate the plants effectively and
- Discussion and observations based on potential audit findings.

1.4 AUDIT TEAM

Audit Team	Name	Position
Internal Audit Function of Swellendam Municipality	Mr. Ashwin Petersen	Senior Internal Auditor
	Mr. Herschelle Swart	Internal Auditor
	Mr. Xola Mahlaba	Internal Audit: Intern

1.5 MANAGEMENT'S RESPONSIBILITY IN TERMS OF INTERNAL CONTROL

Management is charged with the responsibility for establishing a network of processes with the objective of controlling the operations and processes of Swellendam Municipality in a manner that provides the Council with reasonable assurance that those risks are being managed and objectives are being met. Implementing internal controls is a function of management and is an integral part of the overall process of managing operations.

Internal Control	Fraud & Error
Internal Control can be defined as a process effected by management to provide reasonable assurance relating to: - Operational Controls - Internal Financial Controls - Compliance Controls The general purpose of an audit is to provide information about the adequacy and effectiveness of the system of internal control, risk management, and governance.	Audit procedures alone, even when carried out with due professional care, do not guarantee that fraud would be detected because of the inherent limitations of an audit. Management's attention is also drawn to the fact that inherent limitations exist in the reliance on internal controls and procedures, as errors and lapses in control result from staff carelessness, misunderstanding of instructions, collusion between individuals, and management override.

1.6 INTERNAL AUDIT OPINION

Internal Audit is required to express an opinion on the adequacy and effectiveness on the governance, risk management, and control processes of the Water and Wastewater Treatment Network processes.

Governance – Based on the audit procedures performed and evidence obtained during the physical inspection of the Water and Waste Water Treatment Plants in Swellendam, Internal Audit is of the opinion that governance practices relating to operational oversight, accountability, and supervisory responsibilities require significant improvement. Due to the lack of staff capacity at the plants, this could lead to operational challenges. The absence of a designated Superintendent at the Wastewater Treatment Plant in Swellendam, limited staff awareness of escalation and reporting procedures, and the lack of a formalised shift handover process indicate weaknesses and operational governance.

Risk Management – Internal Audit is of the opinion that the current risk management practices at the Water and Wastewater Treatment Plants are Insufficient as risks were identified, including poor maintenance on sludge drying beds, lack of after-hours supervision, and inadequate access and safety controls, increasing risks of contamination and non-compliance

Additionally, the lack of proper access controls, safety signage, and CCTV monitoring increases both security and safety risks. These conditions reflect inadequate risk identification, mitigation, and monitoring processes at departmental and operational levels.

Control Processes – Internal Audit's assessment concludes that the internal control environment at both plants is inadequate and not operating effectively. The physical inspection identified several control deficiencies, including unrestricted access, a lack of visitor and shift registers, and overall poor housekeeping.

1.7 REPORTING FRAMEWORK

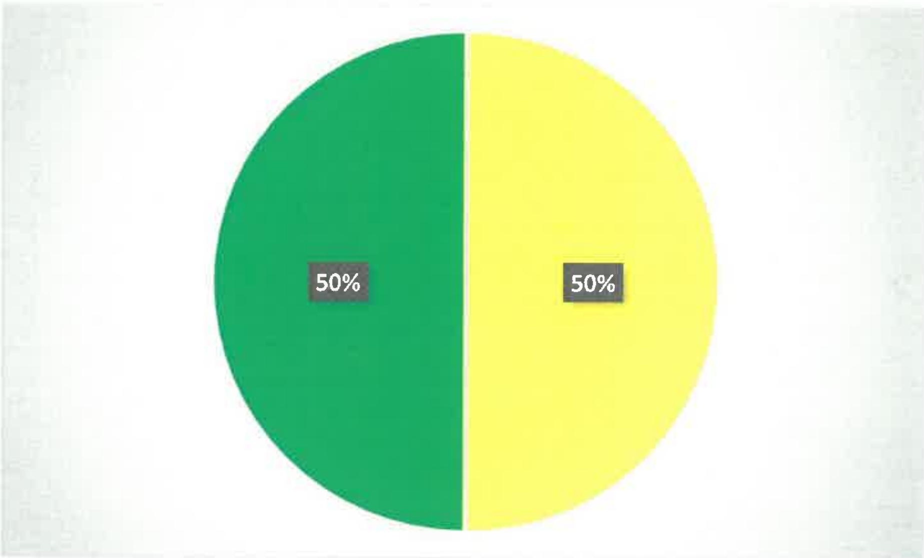
The findings identified have been broadly categorised into:

Rating	Suggested Management Action
Critical	Significant control weaknesses requiring immediate management action
Significant	Control weaknesses that are regarded as serious and require management action within a short period of time
Housekeeping	These control weaknesses do not represent a significant risk to the control environment and can normally be corrected at a minimal cost. The correction of these control weaknesses will have the effect of an improved control environment.
Positive	No action is needed. Management made progress in control the environment.

In order to assist management with the allocation of resources to address the weaknesses and improve internal control, we have assigned subjective ratings to each of our recommendations. These ratings are for guidance purposes only, and management must evaluate them in the light of their own experience and risk appetite.

Individual ratings do not necessarily take into account the effect of compensating controls or control weaknesses in other areas. Therefore, individual ratings should not be considered in isolation, and their effect on other objectives and areas also be considered.

1.8 OBJECTIVES AND SUMMARY OF RESULTS



Summary of Results	Rating of Finding
1. Inadequate access control at Wastewater Treatment Works due to non-functional gate motor	Significant
2. Poor maintenance of sludge drying beds at the Wastewater Treatment Plant	Significant
3. Lack of after-hours supervision at the Wastewater Treatment Plant	Significant
4. Lack of a visitor/sign-in register at the Wastewater Plant	Housekeeping
5. Inadequate surveillance and security controls in the panel room at the Wastewater Treatment Plant	Housekeeping
6. Safety and hazardous material signage for chlorine and coagulant rooms Not clearly visible	Housekeeping

2. DETAILED AUDIT FINDINGS

Areas where Management's attention is drawn for further attention improvement of the control environment follow:

2.1. Inadequate access control at Wastewater Treatment Works due to non-functional gate motor	Significant

Criteria

In accordance with the Swellendam Municipality By-Law relating to water and sanitation services and industrial effluent, section 13: unauthorised use of water services, it states that no person may, temporarily or permanently, gain access to water services from the water supply system, sewage disposal system or any other sanitation or effluent services unless an agreement has been entered into with the municipality for the rendering of those services.

Condition

During the physical inspection, Internal Audit observed that the entrance to the Waste Water Treatment Plant was not secured, and access was not restricted to authorised personnel only. Although there is a gate before entering, the gate is not properly controlled, especially from third parties accessing the plant without any authorisation.

Root Cause

- Inadequate implementation of access control measures.

Impact/ Effect

- Increased risk of unauthorised entry, vandalism, theft, or safety incidents.
- Potential liability for injuries incurred by unauthorised persons.

No	Audit Recommendation	Management Agreed Action	Responsibility and Status
1	Internal Audit recommends implementing proper access control mechanisms such as locked gates, signage, and monitored entry protocols. Regularly review access controls to ensure compliance and keep unauthorised access restricted. In addition, develop a sign-in/out register for accessing the premises.	Management agreed with the finding. The faulty electronic motor gate and keypad entrance will be repaired.	**Responsible Person(s):** Jenovaan Booysen **Due Date:** 27 March 2026

Closing Comments: Chief Audit Executive

Management's Response is noted and accepted. Corrective action will be followed up.

2.2. Poor maintenance of sludge drying beds at the Wastewater Treatment Plant	Significant

Criteria

In accordance with the Swellendam Municipality By-Law relating to water and sanitation services and industrial effluent, section 38: provision and maintenance of water installations, it states that an owner must provide and maintain his water installation and sewage at his own cost.

Condition

During the physical inspection, Internal Audit observed that the sludge drying beds at the Waste Water plant were observed to be poorly maintained.

Root Cause

- Staff capacity and skilled personnel.

Impact/ Effect

- Lack of operational oversight and maintenance control.
- Non-compliance, process failures, and plant inefficiencies.

No	Audit Recommendation	Management Agreed Action	Responsibility and Status
1	Internal Audit recommends implementing a routine cleaning and maintenance schedule for sludge drying beds. In addition, assign staff responsibilities and ensure monthly monitoring of maintenance activities.	Management agreed with the finding. Screw pressers to be operational by the end of March 2026.	**Responsible Person(s):** Jenovaan Booysen **Due Date:** 31 March 2026

Closing Comments: Chief Audit Executive

Management's Response is noted and accepted. Corrective action will be followed up.

2.3. Lack of after-hours supervision at the Wastewater Treatment Plant	Significant

Criteria

In accordance with best practice and the Water Act, no, 54 of 1956, Schedule 4: minimum class of process controller required per shift, and supervision, operations and maintenance support services requirements, it states that Class I, Class II, Class III, and Class IV must be available at all times, but may be in-house or outsourced.

Condition

During the review, Internal Audit observed that no shift register was maintained and that the Waste Water plant was unattended after 16h00 when staff left the plant.

Root Cause

- Insufficient staffing and absence of shift management procedures.

Impact/ Effect

- Potential undetected plant failures outside working hours.
- Non-compliance with continuous monitoring expectations.

No	Audit Recommendation	Management Agreed Action	Responsibility and Status
1	Internal Audit recommends that a shift register be implemented for after-hours monitoring arrangements, including rotation of shifts, remote and/or standby processes.	Management is in agreement with the finding. A 24/7 Shift register was proposed to the Senior Management Team (SMT) for implementation.	**Responsible Person(s):** Jenovaan Booysen **Due Date:** 31 March 2026

Closing Comments: Chief Audit Executive

Management's Response is noted and accepted. Corrective action will be followed up.

2.4. Lack of a visitor/sign-in register at the Wastewater Plant	Housekeeping

Criteria

In In accordance with the Swellendam Municipality By-Law relating to water and sanitation services and industrial effluent, section 13: unauthorise use of water services, it states that no person may, temporarily or permanently, gain access to water services from the water supply system, sewage disposal system or any other sanitation or effluent services unless an agreement has been entered into with the municipality for the rendering of those services.

Condition

During the physical inspection, Internal Audit observed that no visitor and/or sign-in/out register was available at the plant to track who accessed the premises.

Root Cause

- Lack of administrative controls and oversight at the facility.

Impact/ Effect

- Inability to track visitors or contractors for accountability or emergency response.
- Increased security and safety risks.

No	Audit Recommendation	Management Agreed Action	Responsibility and Status
1	Internal Audit recommends that a mandatory sign-in/out register be developed and maintained for visitors and staff at all the access points, and that periodic review must be conducted to ensure the completeness and accuracy thereof.	Management agreed with the finding and will implement a visitors and staff register.	**Responsible Person(s):** Jenovaan Booysen **Due Date:** 30 January 2026

Closing Comments: Chief Audit Executive

Management's Response is noted and accepted. Corrective action will be followed up.

2.5. Inadequate surveillance and security controls in the panel room at the Wastewater Treatment Plant	Housekeeping

Criteria

In accordance with best practice, it is required that municipal assets are properly safeguarded and attended to prohibit any unwanted activities.

Condition

During the physical inspection, Internal Audit observed that the electrical panel room at the Waste Water plant was found unattended and not equipped with CCTV cameras and/or monitoring controls to detect unwanted activities.

Root Cause

- Inadequate security and surveillance controls.

Impact/ Effect

- Potential tampering, unauthorised access, and/or safety incident.
- Potential damage to key operational systems can go undetected.

No	Audit Recommendation	Management Agreed Action	Responsibility and Status
1	Internal Audit recommends installing CCTV cameras and ensuring restricted access to the panel room.	Management agreed with the finding, and CCTV cameras to form part of capital budget inputs for the 2026/27 financial year will be implemented.	**Responsible Person(s):** Jenovaan Booysen **Due Date:** 30 July 2026

Closing Comments: Chief Audit Executive

Management's Response is noted and accepted. Corrective action will be followed up.

2.6. Safety and hazardous material signage for chlorine and coagulant rooms Not clearly visible	Housekeeping

Criteria
In accordance with the Occupational Health and Safety Act (OHSA), it is required that hazardous chemical and general safety signs be made visible for safety purposes.

Condition
During the physical inspection, Internal Audit observed that safety and hazard warning signs were not visible in some chlorine rooms, coagulant stations, and operational areas at the Waste Water treatment plant.

Root Cause
- Lack of routine inspections and signage replacement processes.

Impact/ Effect
- Increased risk of accidents or exposure to hazardous substances.
- Non-compliance with safety legislation.

No	Audit Recommendation	Management Agreed Action	Responsibility and Status
1	Internal Audit recommends that a full assessment be conducted on the wastewater plant, which requires safety signage, and ensures that all missing or faded signs are replaced. In addition, implement periodic reviews to maintain compliance.	Management, in agreement with finding and, will ensure all required signage will be installed where applicable	**Responsible Person(s):** Jenovaan Booysen **Due Date:** 30 March 2026

Closing Comments: Chief Audit Executive
Management's Response is noted and accepted. Corrective action will be followed up.

3. RE-ASSESSMENT OF KEY RISK

Risk	Pre-audit Inherent Risk Rating	Risk Treatment / Current control processes	Post Audit Inherent Risk Rating	Executive Finding Summary	Post Audit Residual Risk Rating
Ageing infrastructure and inadequate capacity of the water and wastewater network	90 (High)	• Operational Plan; • Grant Funding Allocations for projects; • Implementation of Capital & Maintenance Budget (Limited) and; • Monthly monitoring of water and wastewater samples.	67.50 (High)	During the physical inspection conducted various internal control deficiencies were noted. The following were identified: • Inadequate access control at Wastewater Treatment Works due to non-functional gate motor; • Poor maintenance of sludge drying beds at the Wastewater Treatment Plant; • Lack of after-hours supervision at the Wastewater Treatment Plant; • Lack of a visitor/sign-in register at the Wastewater Plant; • Inadequate surveillance and security controls in the panel room at the Wastewater Treatment Plant and; • Safety and hazardous material signage for chlorine and coagulant rooms Not clearly visible	72 (High)

Risk Appetite Statement:

The post-audit risk rating of the risk is above the risk appetite of **40** as per the risk appetite statement in the 2024/25 Risk Management Policy, and additional measures are needed to address and manage the risk.

4. DISTRIBUTION LIST

This report has been prepared for the sole and exclusive use of Swellendam Municipality. Therefore, it may not be made available to anyone other than authorised persons within the municipality or relied upon by any third party. No part of this work may be reproduced and/or transmitted in any form by any means, electronic or mechanical, including photocopying and recording, or by information storage or retrieval system, except as permitted, in writing by Swellendam Municipality.

No	Key Strategic Official(s)	Name	To Take Action	Secure Action	For Information & oversight
1.	Audit and Performance Committee	Audit and Performance Committee Members			✓
2.	Auditor-General of South Africa (ASGA)	Auditor-General of South Africa (ASGA)			✓
3.	Accounting Officer	Ms. A. Vorster			✓
4.	Director: Financial Services	Ms. E. Wasserman		✓	✓
5.	Director: Community Services	Mr. K. Stuurman			✓
6.	Acting Director: Infrastructure Services	Mr. W. Treurnicht			✓
7.	ICT System Administrator	Mr. A. Meyer	✓	✓	✓

5. DISCLAIMER

Please note that Internal Audit only considered and expressed an opinion based on the physical inspection conducted on the information and documentation made available and accepted the correctness of the instructions received. This report is purely based on the investigation conducted on the Swellendam water and wastewater plants.

6. ACCEPTANCE OF INTERNAL AUDIT REPORT

We agree to the audit findings and recommendations made and hereby accept the abovementioned report.

Mr. J. Booysen
Manager: Water and Sanitation Services
Date:

Comments:
The internal audit was fair and purely based on the data and/or items that could physically be verified.

Ms. A Vorster
Municipal Manager
Date:

Comments:

Annexures

Wastewater Treatment Plant

No Safety and Hazards signs in Chlorine Room

Poorly Maintained Sludge Drying Beds

Chlorine Room Not Equipped with CCTV Cameras

Unauthorised Access in the Electrical Room

No CCTV Cameras in the Electrical Room

No Access Control Measures Before Entering the Wastewater Plant

Water Treatment Plant

Unauthorized Access in the Chlorine Room

No CCTV Cameras in Chlorine Room

No Safety and Hazards Signs/Warnings in Chlorine Room