

**NATIONAL ASSEMBLY**

**FOR WRITTEN REPLY**

**QUESTION NO 1963**

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**(INTERNAL QUESTION PAPER NO. 19)**

**1963. Mr B N Herron (Good) to ask the Minister of Water and Sanitation:**

(1) Whether, considering that in 2022 the residents lodged complaints to his department following the contamination of the Rooiwal Waste Water Treatment Works, and noting the investigations conducted by the SA Human Rights Commission that also found that the water posed serious health risks and that the residents’ constitutional right to have access to clean water was not met by the City of Tshwane Metropolitan Municipality, his department has been informed of the specified issues; if not, does his department not have an oversight team looking into complaints received from residents and/or organisations; if so, what remedial actions have been taken to remedy the specified situation;

(2) What total number of times since its establishment has the specified Rooiwal plant undergone major upgrades to increase its capacity to handle the pressures of demand from the area it services;

(3) What type of maintenance has taken place at the Rooiwal plant in the past year? NW2214E

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**MINISTER OF WATER AND SANITATION**

1. The Department has issued Notices and Directives to the City of Tshwane (CoT) Metropolitan Municipality and the Department is currently engaging CoT to reach an agreement that will be approved by the Courts. This is yet to be finalised.
2. The Rooiwal Wastewater Treatment Works (WWTW) consists of three (3) works: Rooiwal North, Rooiwal West, and Rooiwal East. The biofilter effluent of Rooiwal West must be further treated by the activated sludge system of the Rooiwal North Works. Rooiwal East is biofilters with a separate effluent stream.

A project to upgrade the WWTW was started in 2008 and completed in 2012, with the following deliverables:

* Replacement of centrifugal blowers on the Rooiwal Northern Works.
* The replacement of return activated sludge (RAS) pumps at Rooiwal Northern Works.
* The structural refurbishment of 3 anaerobic digesters at Rooiwal Western Works.
* New mechanical and electrical equipment for anaerobic digesters at Rooiwal Western Works and EW.
* Extension of the sludge drying pans.
* SCADA for blowers and RAS pumps

1. Maintenance is being performed on all the infrastructure. Details of the dates and status of planned maintenance are enclosed in **Annexure 1 attached.**

Despite the above, Rooiwal WWTW is dysfunctional and under-capacitated. In June 2023, the Tshwane City Council voted R450 million for short-term repairs to the Rooiwal Waste Water Treatment Works and DWS, National Treasury, the DBSA and the City are in the process of developing a financing plan for the medium upgrading of the capacity of the Rooiwal Waste Water Treatment Works. This will involve the upgrading of the plant’s treatment capacity by 130 Ml of waste water per day (ML/day), coupled with desilting of sludge at the Leeukraal dam. The desilting of the dam will enable the Temba Water Treatment Works to function better and produce drinking water which meets minimum standards. The current capacity of the plant is 250 ML/day. The capacity will be increased to 380 ML/day. This will be sufficient to treat the current and future projected waste water load in Hammanskraal. The project is due to start in July 2024 and end in June 2026.



**ANNEXURE 1**

**Rooiwal East and West Wastewater Treatment Works**

| **Ref No.** | **AREA** | **Required Maintenance** | **Planned Start Date** | **Planned End Date** | **Estimated Costs** | **Status** | **Actual Costs (R)** |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | **Rooiwal East WWTP** | | | | | |  |
|  |  | **Inlet Works** | | | | | |  |
| 1.1 | Screens | Service screen No. 1 and 2 | 10-Jan-23 | 28-Feb-23 |  | Completed | 804471.80 |  |
| 1.1.1 | Screens | Repair screen no.1 | Emergency | repairs |  | Completed | 61238.94 |  |
| 1.1.2 | Screens | Repair screen no.2 | Emergency | repairs |  | Completed | 62555.90 |  |
| 4 | Grit Classifier | Repair Grit Classifier No. 2 | 01-Aug-22 | 30-Sept-22 | 366 000 | Complete | 295000.00 |  |
| 5.1 | Degritter | Service Grit pump No.1 and 2 | 01-Sept-22 | 30-Sept-22 | 50 000 | Complete | 171892.88 |  |
| 6.1 | Degritter | Service Grit scrapper No. 1 and 2 | 01-Nov-22 | 30-Nov-22 | 110 000 | Complete | 59190.51 |  |
| 6.1.1 | Degritter | Remove sand from Degritter no.1 and 2 | Emergency | repairs |  | Completed | 65000.00 |  |
| 7 | Degritter | Replace Grit scrapper rubbers | 01-Nov-22 | 30-Nov-22 |  | Complete | 25000.00 |  |
|  |  | **Primary Settling Tanks** | | | | | |  |
| 10.1 | PST | Remove sand from PST no.1 to 8 | Emergency | repairs |  | Completed | 1120838.39 |  |
| 11 | Raw sludge sump | Service Fine screens No. 2 | 01-Sept-22 | 30-Jan-23 |  | Completed | 475737.93 |  |
| 12 | Raw sludge sump | Service Fine screens No. 1 | 01-Mar-23 | 30-Mar-23 |  | Screen removed for repair | 475737.93 |  |
| 13.1 | Raw sludge pump station | Repair Raw sludge pump no.2 | Emergency | repairs |  | Completed | 15930.40 |  |
|  |  | **Rooiwal West WWTW** | | | | | |  |
|  |  | **Humus Pump Station** | | | | | |  |
| 1.1.2 | HPS | Repair Humus pump and motor | Emergency | repairs |  | Completed | 134907.84 |  |
|  |  | **Anaerobic Digesters** | | | | | |  |
| 4 | Anaerobic digesters | Service digested sludge pumps non-return valves | 30-Oct-22 | 30-Oct-22 |  | Complete | 297402.82 |  |

**Rooiwal North Wastewater Treatment Works**

| **No.** | **AREA** | **Required Maintenance** | **Planned Start Date** | **Planned End Date** | **Estimated Costs** | **Status** | **Actual Costs** |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | **Inlet Works** | | | | | |  |
| 1.1 | Inlet Works | Service screen No. 1 | 01-Jul-22 | 30-Jul-22 |  | Completed | 367227.89 |  |
| 1.2 | Inlet Works | Service screen No. 2 | 01-Aug-22 | 30-Aug-22 |  | Completed | 367227.89 |  |
| 1.2a | Inlet Works | Repairs on Screen 2 and 3 | Emergency | repairs |  | Completed | 158017.82 |  |
| 3.1 | Inlet Works | Service Conveyor belts | 01-Oct-22 | 30-Oct-22 |  | Complete | 167816.92 |  |
| 4.1 | Inlet Works | Repair Grit Classifier no.2 motor and gearbox | Emergency | repairs |  | Complete | 160882.92 |  |
| 4.2 | Inlet Works | Repair grit pump no.2 | Emergency | repairs |  | Complete | 49909.97 |  |
|  |  | **Inlet Works** |  |  |  |  |  |  |
| 4.3 | Inlet Works | Repair grit pumps x 4 | Emergency | repairs |  | Complete | 166336.56 |  |
|  |  | **Primary Settling Tanks** | | | | | |  |
| 5.1 | PST | Remove sand PST 1 | 01-Sept-22 | 30-Sept-22 |  | Complete | 252359.20 |  |
| 5.2 | PST | Remove sand PST 2 | 10-Jan-23 | 30-Jan-23 |  | Complete | 252359.20 |  |
| 5.3 | PST | Remove sand PST 3 | 01-Apr-23 | 30-April-23 |  | Complete | 252359.20 |  |
| 7 | PST | Refurbish PST Panel boxes | 01-Oct-22 | 30-Oct-22 |  | Service provider busy | 121537.48 |  |
| 9.1 | PST | Service PST 1 Rotating Bridge | 01-Jul-22 | 30-Jul-22 |  | Complete | 28752.24 |  |
| 9.2 | PST | Service PST 2 Rotating Bridge | 01-Aug-22 | 30-Aug-22 |  | Complete | 15868.68 |  |
| 9.3 | PST | Service PST 3 Rotating Bridge | 01-Sept-22 | 30-Sept-22 |  | Complete | 31115.96 |  |
|  |  | **BNR Reactors** | | | | | |  |
| 15.1 | Reactor 1 | Repair leaks on gas pipes, main gas pipe actuator and gearbox | Emergency | repairs |  | Leaks closed, service provider still busy | 548701.80 |  |
| 18 | Reactor 3 | Repair Internal Recirculation Pump x 1 | 01-Aug-22 | 30-Aug-22 |  | Complete | 29037.47 |  |
| 20.2a | Reactor 2 | Repair Screw pump no.2 gearbox | Emergency | repair |  | Service provider busy with repairs | 342833.84 |  |
|  |  | **Blowers** | | | | | |  |
| 24.1 | Blowers 3 | Quarterly maintenance | 01-Sept-22 | 30-Sept-22 |  | Service provider awaiting spares | 442750.00 |  |
| 24.1a | Blowers | Repairs on Blowers main supply | Emergency | Repairs |  | Complete | 407662.00 |  |
| 24.1b | Blowers | Repairs on Blower 2 and 5 | Emergency | Repairs |  | Complete | 115943.36 |  |
| 24.1c | Blowers | Repairs on Blower 5 | Emergency | Repairs |  | Complete | 68642.30 |  |
| 24.1d | Blowers | Repairs on electric panels of Blower 2,3,4,5 and 8 | Emergency | Repairs |  | Complete | 147193.46 |  |
| 24.4 | Blowers 8 | Quarterly maintenance | 01-Dec-22 | 30-Dec-22 |  | Busy with repairs | 442750.00 |  |
| 24.6 | Blowers 4 | Quarterly maintenance | 01-Feb-23 | 28-Feb-23 |  | Service provider awaiting spares | 442750.00 |  |
| 24.7 | Blowers 5 | Quarterly maintenance | 01-Mar-23 | 30-Mar-23 |  | Service provider awaiting spares | 442750.00 |  |
| 24.9 | Blowers 2 | Quarterly maintenance | 01-May-23 | 30-May-23 |  | Service provider awaiting spares | 442750.00 |  |
| 26 | Blowers 1-9 | Level 3 Electric Motor Preventative Maintenance | 01-Aug-22 | 30-Aug-22 | 1 900 000 | Included in quarterly maintenance quotations |  |  |
|  |  | **Clarifiers** | | | | | |  |
| 29.1 | Reactor 2 Clarifiers | Service Clarifier Rotating bridges | 01-Sept-22 | 30-Sept-22 |  | Complete | 132000.00 |  |
| 29.1a | Reactor 2 Clarifiers | Repair Clarifier 2.6 Rotating bridge | Emergency | Repairs |  | Complete | 19702.26 |  |
| 29.2a | Reactor 1 Clarifiers | Repair Clarifier1.4 Rotating bridge | Emergency | Repairs |  | Complete | 19593.62 |  |
| 29.2b | Reactor 1 Clarifiers | Repair Clarifier 1.5 Rotating bridge | Emergency | Repairs |  | Complete | 21540.98 |  |
| 29.3 | Reactor 3 Clarifiers | Service Clarifier Rotating bridges | 01-Nov-22 | 30-Nov-22 |  | Complete | 148048.78 |  |
| 29.3a | Reactor 3 Clarifiers | Repair Clarifier 3.3 and 3.5 Rotating bridges | Emergency | Repairs |  | Complete | 22502.26 |  |
| 29.3b | Reactor 3 Clarifiers | Repair Clarifier 3.6 Rotating bridge | Emergency | Repairs |  | Complete | 23048.95 |  |
| 29.3c | Reactor 3 Clarifier | Repair Clarifier 3.4 Rotating bridge | Emergency | Repairs |  | Complete | 66000.00 |  |
| 30.1 | Reactor 1 Clarifiers | Service tip valves | 01-Dec-22 | 30-Dec-22 | 35 000 | Serviced 1.1; 1.2 and 1.3 | 97365.28 |  |
| 31.1 | Reactor 1 Clarifiers | Service bottom valves | 01-Jul-22 | 30-Jul-22 |  | Serviced 1.5 bottom valve | 13435.24 |  |
| 31.2 | Reactor 2 Clarifiers | Service bottom valves | 01-Aug-22 | 30-Aug-22 |  | Serviced 2.6 bottom valve | 15645.80 |  |
|  |  | **Dissolved Air Floatation Pump Station** | | | | | |  |
| 32.1a | DAF Screen | Electrical repair on Rake screen | Emergency | Repairs |  | Complete | 55307.38 |  |
| 33 | DAF sump pumps | Service DAF Bypass pumps x 2 | 01-Sept-22 | 30-Sept-22 |  | Serviced pump no.2 | 57633.29 |  |
| 33.1 | DAF sump pumps | Repair DAF Bypass pumps no.1 | Emergency | Repairs |  | Complete | 116107.90 |  |
|  |  | **Aerobic Digester** | | | | | |  |
| 34.1 | Aerobic pump station | Repair Sludge Pumps non-return valves x 2 | Emergency | Repairs |  | Complete | 138856.88 |  |
| 34.2 | West Anaerobic Digesters | Repair Digested sludge pump | Emergency | Repairs |  | Complete | 157607.86 |  |
| 34.3 | West Humus Pump Station | Repair Humus sludge pumps | Emergency | Repairs |  | Complete | 134907.84 |  |
| 34.4 | West Farmers Pump Station | Repair Farmers pump motor | Emergency | Repairs |  | Complete | 319711.90 |  |
| 35 | Aerobic digester | Service Fine Screens x 2 | 01-Oct-22 | 30-Oct-22 |  | Quotation for approval | 726211.80 |  |
|  |  | **Chlorination System** | | | | | |  |
| 37 | Chlorine building | Replace Chlorine pump no1 rotating unit | 01-Jul-22 | 30-Jul-22 |  | Complete | 253416.00 |  |
| **Transformers** | |  |  |  |  |  |  |  |
| 42.1 | Transformers | Service of transformers | 01-Sept-22 | 30-Sept-22 |  | Complete | 493141.80 |  |
| **Flow Meters** | |  |  |  |  |  |  |  |
| 44.1 | All Works | Calibrate flow meters | 01-Sept-22 | 30-Sept-22 |  | Complete | 46946.40 |  |
| **Other Equipment** | |  |  |  |  |  |  |  |
| 48 | Bin trailers | Repair bin trailers x 3 | 01-Sept-22 | 30-Sept-22 |  | 1 x trailer repaired | 3205.00 |  |
| 51 | Grass Slasher | Repair grass slasher x 2 | 01-Oct-22 | 30-Oct-22 | 16 000 | Complete |  |  |
| 52 | Computers | Repair computers x 3 | 01-Jul-22 | 30-Jul-22 | 47 000 | Call logged with IT |  |  |

**Rooiwal Belt Filter Press Maintenance**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **No.** | **Area** | **Required Maintenance** | **Planned Start Date** | **Planned End Date** | **Estimated Costs** | **Status** | **Actual Costs** |  |
|  |  | **Bottom Belt Presses** | | | | | |  |
| 53 | Press no. 5 | Refurbish Belt press | 01-Sept-22 | 30-Jan-23 |  | Spares used to repair others 4 Belt Presses | 860718.65 |  |
| 54 | All Presses | Service | 01-Jul-22 | 30-Jun-23 | 2 200 000 |  |  |  |
| 54.1 | All Presses | Preventative maintenance | 01-Jul-22 | 30-Aug-23 |  | Complete | 245477.60 |  |
| 54.2 | Press no.2 | Repair poly pump, actuator valve | Emergency | Repairs |  | Complete | 368413.93 |  |
|  |  | **Top Belt Presses** | | | | | |  |
| 61.1 | Press no. 4 | Replace top and bottom belts | Emergency | Repairs |  | Complete | 198172.96 |  |
| 61.2 | All Presses | Preventative maintenance | 01-Sept-22 | 30-Oct-23 |  | Complete | 334247.04 |  |
| 61.3 | Top Belt Presses | Repair rear gate to Sludge Hopper | Emergency | Repairs |  | Complete | 19840.57 |  |