Friday, 1 March 2024 (Day 3)

Utility Study Tour: Cape Town

(Sponsored by City of Cape Town)

PICK UP LOCATION: The Table Bay Hotel, V&A Waterfront, Cape Town

*Limited to 50 guests

9:00 – 9:45 AM	**Departure from Hotel to Zandvliet Wastewater Treatment Works**
9:45 – 10:00 AM	**Welcome and Introduction** Etienne Hugo, Acting Executive Director: Water and Sanitation, City of Cape Town
10:00 – 10:15 AM	**Overview of Zandvliet WWTW upgrade project** Rajan Moodley, Manager: Waste Water Treatment, Water and Sanitation, City of Cape Town
10:15 – 10:30 AM	**Safety Induction**
10:30 – 11:30 AM	**Site Tour of Zandvliet WWTW** *(Including display of advanced MBR technology and the digital control room)* Keith Olsen, Head: Project and Implementation, Water and Sanitation, City of Cape Town
11:30 – 12:30 PM	**Lunch Break** *(3D Virtual reality experience of the proposed Faure New Water Scheme available)*
12:30 – 1:00 PM	**Travel to Faure Water Treatment Plant**
1:00 – 1:30 PM	**Presentation: Advanced water purification processes for water reuse at Faure New Water Scheme** Michael Killick, Director: Bulk Services, Water and Sanitation, City of Cape Town
1:30 – 2:00 PM	**Site Tour of Faure Water Treatment Plant** Myezo Poyo: Head Bulk Water Operations, Water and Sanitation, City of Cape Town
2:00 – 2:15 PM	**Closing Remarks** Cllr Zahid Badroodien, Mayoral Committee Member for Water and Sanitation, City of Cape Town
2:15 – 3:00 PM	**Travel to Table Bay Hotel**

Zandvliet WWTW and the technology upgrade project

The City of Cape Town spent R1, 9 billion on state-of-the-art upgrades at Zandvliet Wastewater Treatment Works with the addition of the new Membrane Biological Reactor (MBR). Cutting-edge membrane technology is capable of treating wastewater to near

drinking water standards, with major benefits for environmental rehabilitation and the City's overall Water Strategy.

The overall Zandvliet WWTW upgrade will expand the existing treatment capacity of wastewater by 18 million litres a day, bringing it to a daily total of 90 million litres a day.

Besides the increased capacity, the upgrade will ensure that a high quality treated effluent is released, meeting all licence requirements as laid out by the South African National Department of Water and Sanitation.

About the Membrane Biological Reactor (MBR):

- The MBR contains ultrafiltration membrane 'cassettes' of approximately 2,4m (length) x 2,4m (width) x 2,8m (height), and weighing about 2 tons.

- The cassettes consist of submerged hollow-fibre type membranes, which resemble 'spaghetti' hanging vertically in the sewage. The hollow fibres have microscopic pores through which liquid is extracted, leaving behind solids and contaminants. The extracted liquid then continues through the treatment process.

Faure New Water Scheme (Water Reuse)

The City of Cape Town seeks to include water reuse as part of multiple water sources including dams and aquifers, which contribute to our total water supply, in line with the third commitment described in the City's Water Strategy.

The Faure New Water Scheme is a project for the future, currently in the planning and design phase. The plant will take treated effluent from Zandvliet Waste Water Treatment Plant through an advanced purification process, to drinking water standards.

The water will then be blended with dam water and treated again through conventional processes at an existing water treatment facility (Faure Water Treatment Plant), where our current drinking water comes from.

If successfully implemented, water reuse will make up to 8% of the city's future water supply. That is almost 100million litres of drinking water, guaranteed from water reuse, every day.