



**QUA's EnviQ RF Reinforced  
Hollow Fiber Membrane Ensures  
Reliable Wastewater Recycling  
at a Leading Luxury Hotel**



**Client:** Luxury Hotel

**Plant Capacity:** 120 m<sup>3</sup>/day

The demand for efficient and compact wastewater recycling solutions in the hospitality sector has increased, driven by the growing focus on sustainability and operational efficiency. This leading luxury hotel needed treated water for landscaping, toilet flushing, and other non-potable applications, while meeting its sustainability goals.

### Challenges:

The client required a reliable wastewater recycling solution capable of consistently producing very low turbidity and TSS-free water for reuse in landscaping and utility applications, with water quality consistency critical to luxury hospitality operations. However, the project site had restricted space availability, making conventional treatment systems with clarifiers and tertiary units impractical. The design needed to be compact yet effective within the limited footprint. With a capacity of 120 m<sup>3</sup>/day (22 gpm) and MLSS of 3,000 mg/L, the system demanded membranes that could operate reliably under the mentioned conditions, while ensuring continuous, low-maintenance performance.

### QUA's Solution:

To address these challenges, QUA implemented the EnviQ<sup>®</sup> RF-210 reinforced hollow fiber ultrafiltration membrane system, designed for challenging wastewater applications. The reinforced PVDF hollow fiber membranes provided durability and handled variations in MLSS with ease, ensuring reliable long-term operation.

Its compact design fit within the limited footprint without compromising treatment efficiency. The dual airflow distribution system optimized energy use and reduced cleaning needs, lowering operating costs. Most importantly, the system consistently delivered ultrafiltration-quality water with almost zero turbidity and TSS, meeting the client's stringent reuse requirements without the need for secondary or tertiary filtration.



### Scheme Offered



### Results

Since commissioning in February 2024, the EnviQ RF system has been consistently delivering required water quality on continuous basis. The recycled water is being reliably reused for various hotel utilities, reducing dependency on freshwater. QUA's EnviQ RF membranes have proven to be the ideal solution for the hotel sector, offering reliable water quality, durability, and operational ease.

The installation has enabled the client to achieve stable performance, lower operational costs, and a reduced environmental footprint, aligning perfectly with its sustainability goals.