

**Membrane Bioreactor Wastewater  
Treatment Facility**



**Case Study Details**

| <b>DESIGN CRITERIA</b>        | <b>INFLUENT</b> | <b>EFFLUENT</b> |
|-------------------------------|-----------------|-----------------|
| FLOW: 6 m <sup>3</sup> /d AAF |                 |                 |
| BOD (mg/l)                    | 225             | <5              |
| TSS (mg/l)                    | 225             | <5              |
| TKN (mg/l)                    | 35              | <3              |
| NHS (mg/l)                    | 28              | <1              |
| TP (mg/l)                     | 8               | <0.1            |
| TN (mg/l)                     | 35              | <10             |
| Alkalinity (mg/l)             | 300             | <75             |

This project was incorporated as part of the Earth Rangers Centre (ERC), a sustainable technology demonstration building. The wastewater treatment facility supported ERC's effort of carbon neutrality and energy efficient technology.

H2FLOW EQUIPMENT INC. supplied and installed a complete flat plate membrane bioreactor plant followed by an ultraviolet light disinfection system.

The plant has been operating effectively, rendering wastewater to nearly drinking level quality. The treated water is being reused within the facility for toilets, animal ponds, irrigation and floor washing, contributing to a 98% closed loop wastewater system.

**Start-Up: 2009**