Fact Sheet 6: Remix Water System

A study conducted by EWS to assess the Inner City Water Demands indicate an un-peaked demand of approximately 65 Ml/day. This is a new demand and EWS would require infrastructure in order to accommodate the growth. This is to be done in a phased approach as the demand grows with development in the Inner City. In response to this demand EWS will have to construct remix water system that could support the deficit in supply.

A remix water system consists of a combination of desalinated seawater and treated effluent from a wastewater treatment plant. The water is treated through the use of membrane bioreactor technology (Figure 1).

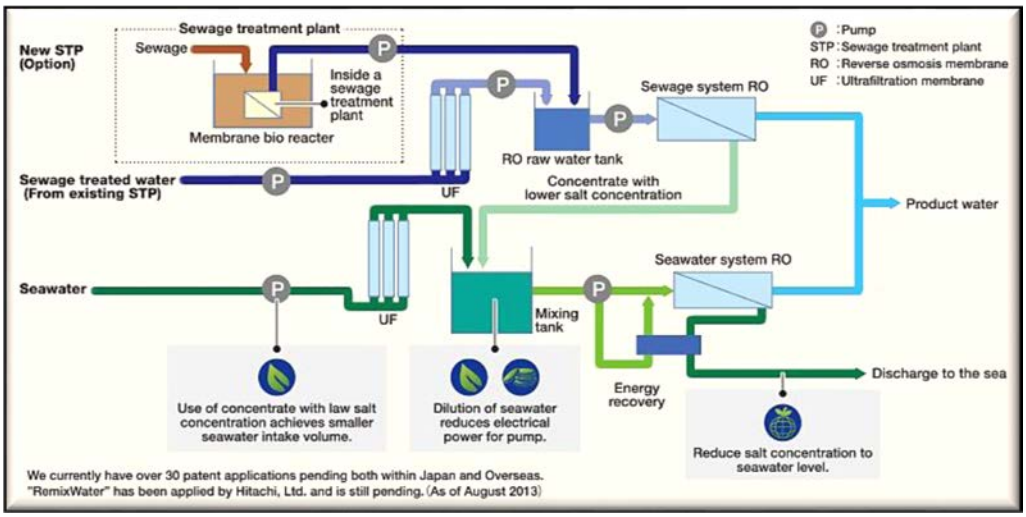

Figure 1: Remix water system overview

Initially a demonstration plant providing approximately 6.25Ml/day would be installed with a possible ultimate scenario of a 100 ML per day plant to provide 50 Ml/day to the Inner City and a further 50Ml/day to the South of Durban being installed based on the outcome of the pilot investigation. This is in alignment to the expected growth and related water demand increase.

In March 2013 a visit was undertaken to a remix water plant in Japan. A pre-feasibility study was conducted by a Japanese company in 2014 and funding was secured in 2015 from NEDO for a feasibility study which is being undertaken by Aurecon.

Studies that are required include:

- Geotechnical Investigations
- Topographical Survey
- Bathymetric Survey
- Seawater Quality Testing
- Specialist Studies for EIA

The demonstration plant is expected to be commissioned in August 2018.

The proposed 100 ML/day plant would be based on 50% Seawater mixed with 50% treated wastewater. The remix plant will use 40-50% less electricity compared to a conventional desalination plant. It is envisaged that this plant would be commissioned towards the end of 2023.