



# Briefing to Media at the Groundbreaking Ceremony of the Keppel Marina East Desalination Plant

29 Jun 2017



# Overview

## Project's brief

- A 137,000m<sup>3</sup>/day (or 30 MiGD) fenceless, dual mode desalination plant, located at Marina East, capable of treating both seawater and reservoir water;
- Raw water is drawn from the sea and Marina Reservoir, Singapore's first reservoir in the heart of the city; and
- The desalination plant shall be built within a 3 ha plot, less than 23m in height and the roof will be made accessible to the public.

# Site Location: Marina East



# Keppel's Approach

Duality of purpose is the key design concept as the plant is designed to operate in dual mode of treating seawater and reservoir water:

- The plant is first and foremost, a desalination plant that also serves as a park, blending in with the environment, and
- The Dual Flow Chamber which regulates either seawater or reservoir water feed also serves as a playground.

The above duality of purpose in design returns the space to the public and nature.



# The Keppel Marina East Desalination Plant

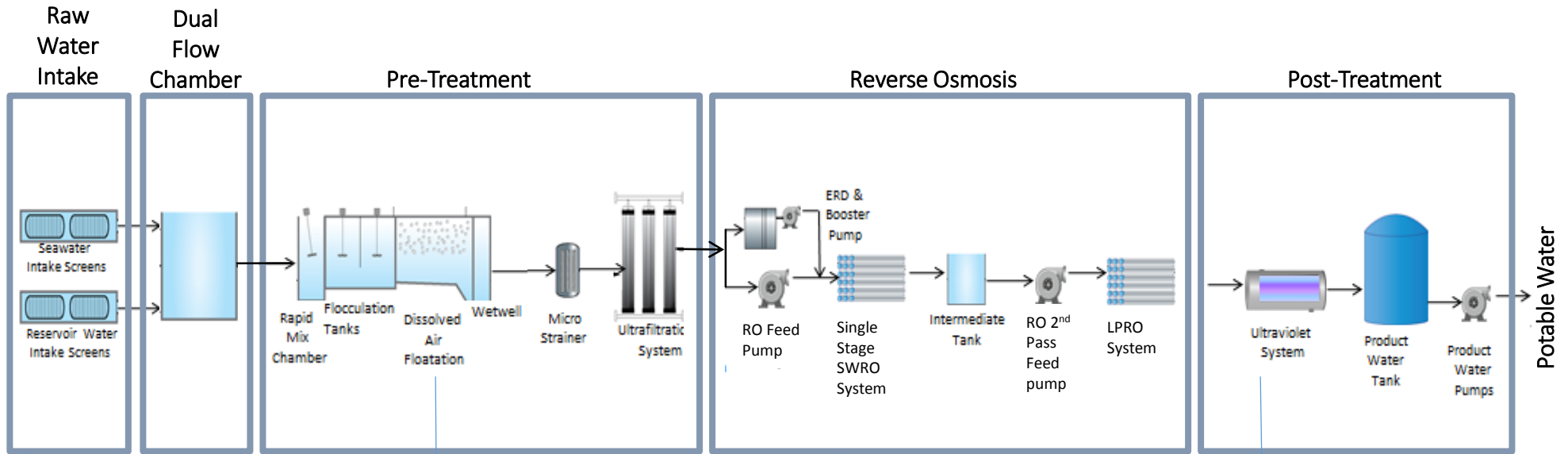




# The Dual Flow Chamber



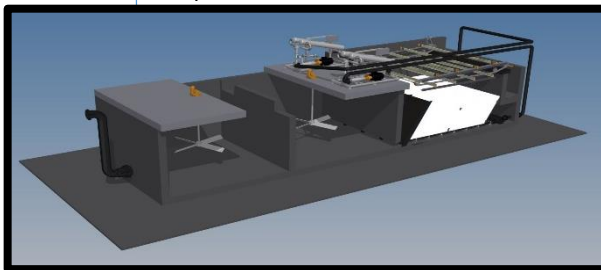
# The Engineering Design



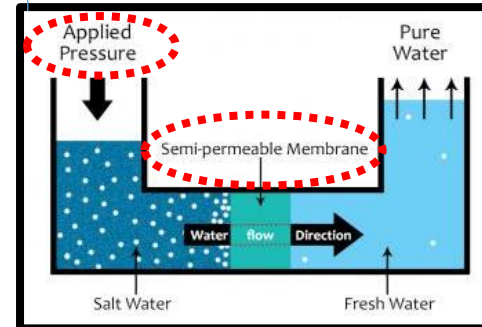
Innovative passive intake system



Compact Dissolved Air Floatation



Energy Efficient Reverse Osmosis System

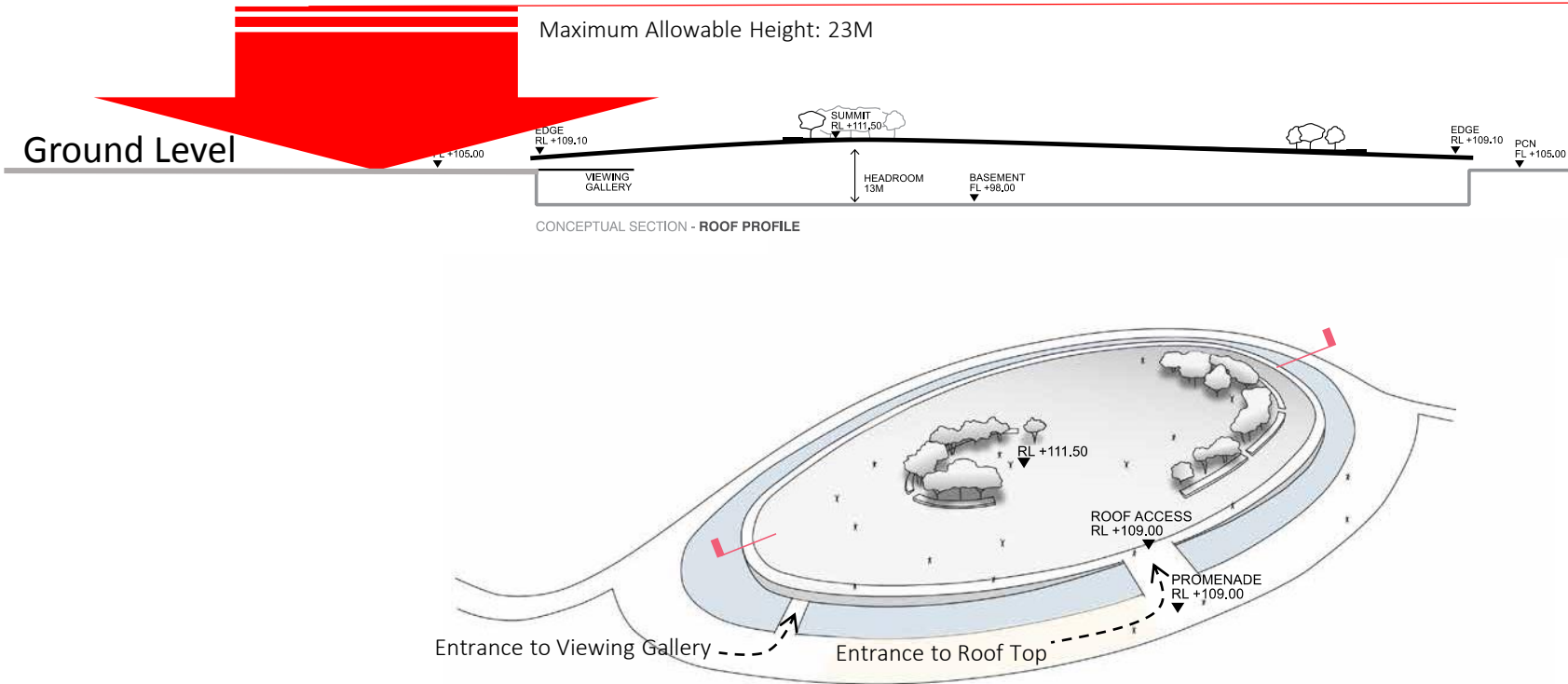


UV as primary disinfection process



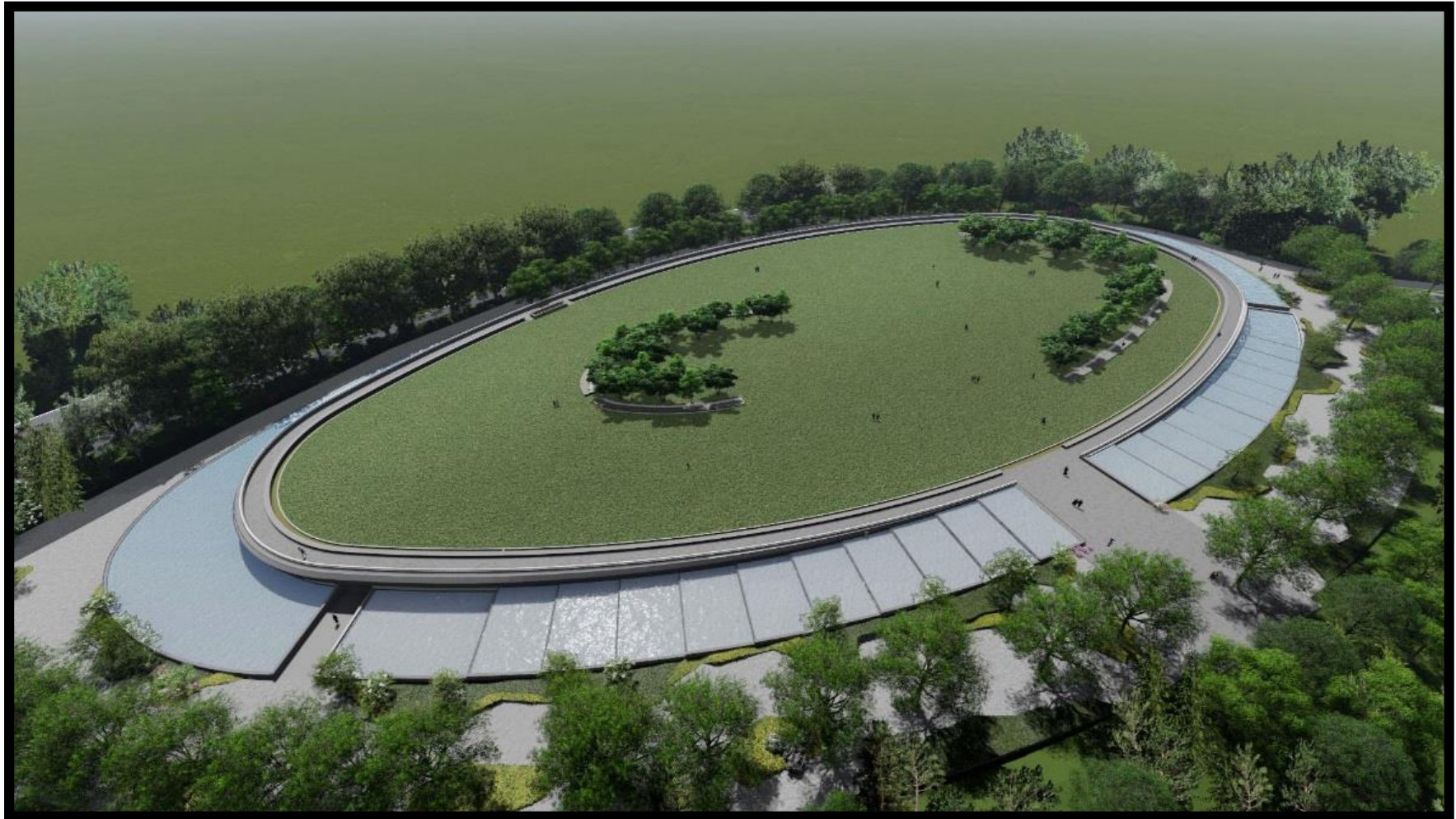
# The Architectural Design: Blend into the environment

A design which allows the whole plant to blend into the environment. Its private viewing gallery and roof top are accessible at the ground level.





# The Architectural Design





# The Architectural Design: Entrance to viewing gallery

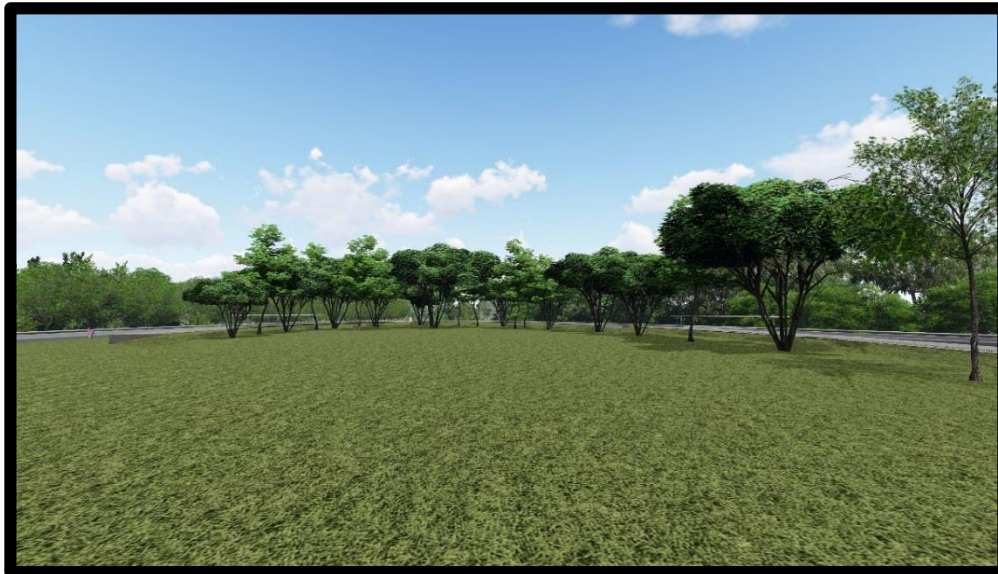




# The Architectural Design: Entrance to roof top



# The Architectural Design: Perspective from roof top

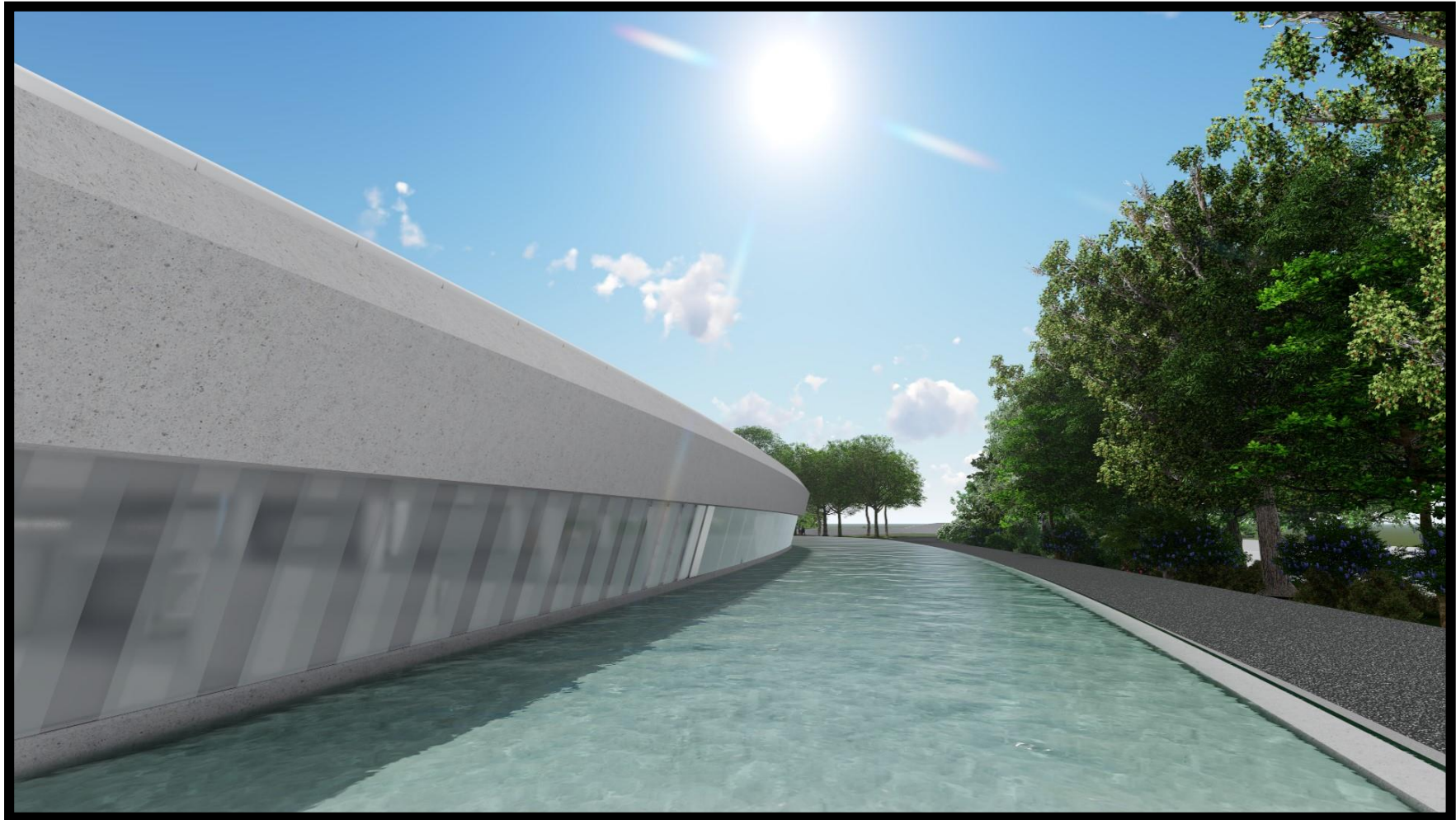




# The Architectural Design: Seamless integration with PCN



# The Architectural Design: Enhanced water features



# The Keppel Marina East Desalination Plant

## A truly Iconic Design in Singapore

- First dual-mode desalination plant treating both seawater and reservoir water;
- First desalination plant located in the city;
- First underground desalination plant designed concurrently as a park - fenceless and blends seamlessly with the surrounding environment.

# A virtual tour of Keppel Marina East Desalination Plant



# Q & A

# Thank You