

Job Reference

Changi Water Reclamation Plant, Singapore



 **BASF**
The Chemical Company

Project Description:

Opened in 2009, the vast Changi Water Reclamation Plant (CWRP) project in Singapore has involved the construction of the world's largest covered sewage treatment plant. Replacing all existing local plants in Singapore, the CWRP is a compact and closed sewage treatment plant built using the latest technology. It is designed to treat 800,000m³ of waste water daily and can be extended to a daily maximum capacity of 2,400,000m³.

Located at the eastern edge of Singapore, the plant is mainly underground and stacked for maximum compactness, taking up only 55 hectares, less than a third of the land area needed for a conventional layout. The plant includes facilities such as grit removal, primary sedimentation, bio-reactors with anoxic and aerobic zones, secondary sedimentation and sludge thickening and drying. The physical and biological treatment provided by the plant produce clean water of the highest international standards, suitable for discharge into the deep sea at the Straits of Singapore. The plant effluent will be suitable for reclamation in the future.

The Challenge:

The client required a waterproofing membrane suitable for flat roofs and walls that would not only provide water tightness, but also add to the aesthetics of the plant's vast roof.



The Solution:

BASF Construction Chemicals supplied 62,000m² of CONICA® waterproofing membrane (CONIPUR® M800 + CONIPUR® TC 458 Pale Green) for the flat roof and a further 40,000m² of CONIPUR® M800 for the basement walls. CWRP is part of Singapore's award-winning Deep Tunnel Sewerage System (DTSS), a \$3.65 billion scheme planned to meet the island's used-water needs for the next 100 years. Conceptualised and managed by Singapore's national water agency, PUB, the mammoth DTSS conveys used water from homes and industries through a 48km long deep tunnel sewer that runs from 20 to 55 metres below ground to the centralised water reclamation plant for treatment.

Other BASF Wastewater References:

United Kingdom

Avonmouth Sewage Treatment Works
Crawley Sewage Treatment Works
Esher Sewage Treatment Works
Newbury Sewage Treatment Works
Great Harwood Sewage Treatment Works
RAF Welford Sewage Treatment Works

Americas

Wastewater Plant, Zipaquira, Colombia
Residual Water Processing Plant, ECHO-PETROL Refinery, Colombia

Asia Pacific

CLK 525 Waste Water Treatment Plant, Hong Kong
Misono Sewage Treatment Plant, Japan
National Sewage Treatment Plant, Malaysia



BASF Construction Chemicals (UK) Ltd

PO Box 4
Earl Road
Cheadle
Cheshire
SK8 6QG

Tel: +44 161 485 6222
Fax: +44 161 488 5220
www.basf-cc.co.uk
www.basf-waterproofing.co.uk