

Singapore Pilots Dutch Land Reclamation Approach



Singapore has announced it will build a polder designed by Royal HaskoningDHV with local partner Surbana Jurong that will add 810ha to Pulau Tekong, one of Singapore's largest islands. This new approach involves building a dike around the area to be reclaimed and draining the water from it – a method that has been proven to work by the Dutch for the past 400 years. This will allow the reclaimed area to be built at a lower level and hence significantly reduce the amount of sand needed for land reclamation.

Traditionally, sand has been used to fill the area to be reclaimed above sea level.

Royal HaskoningDHV and local consultancy Surbana Jurong carried out the detailed study and engineering design with Singapore's Housing & Development Board for this development located in the northeast of Singapore. The studies and design were carried out together with Professor Kees d'Angremond as an expert adviser and Deltares as a Specialist Consultant.

Demand for Sand

According to senior project manager Mark van Zanten, Royal HaskoningDHV, the polder approach has been used in the Netherlands for many centuries, but is still in its infancy in Southeast Asia and the rest of the world. This approach significantly reduces the volume of sand required as compared to the traditional method of land reclamation, and will ultimately result in savings on upfront construction costs.

Rising Sea Levels

Mr Loh Yan Hui, deputy CEO for Infrastructure, Surbana Jurong, added that innovative and cost effective reclamation solutions are needed to help countries tackle the challenge of rising sea levels as a result of global warming. Royal HaskoningDHV's global experience in polder reclamation combined with Surbana Jurong's coastal engineering experience and knowledge of the local environment in Asia offer innovative and cost effective reclamation solutions to clients in Singapore and the region.

This project is estimated to commence at the end of 2017 and complete in 2022.

<https://www.hydro-international.com/content/news/singapore-pilots-dutch-land-reclamation-approach>
