

Bentofix® X

Pond lining system

Project name
Meizhou Cultural Village, China

Supplier
Shenzhen Silco Industrial Co., Ltd.

Product
Bentofix® X2 NSP 4000





Fig. 1: Bentofix® bentonite impregnated and self-seaming overlaps

Challenge

Meizhou City, now known as Meishan City, is a prefectural-level municipality in the Sichuan Province, China. More than 3 million inhabitants are registered in this city. Morphologically, the town is located southwest of the Sichuan Basin, a lowland region surrounded by mountains and drained by the Yangtze River.

The new development project of Meizhou Cultural Village is located in Chongli city in Dongpo district of Meishan city. The owner Sichuan Vanke Meizhou Property Co. proposed this project. The building stands along the lake with the combination of traditional, modern and natural architecture. To give the cultural village an aesthetic and natural appearance, the adjacent lake must be preserved to ensure water retention in all seasons, mainly if it is located next to the Min River.

Solution

The multi-component geosynthetic clay liner (GCL) Bentofix® X was selected as a single lining system because of its low permeability and immediate waterproofing properties. As a pond lining, Bentofix® X provides a barrier that retains the water inside and ensures that there is no seepage loss to the subgrade.

Bentofix® X is manufactured with an extruded polyethylene coating to provide better protection against desiccation and root penetration. Preventing desiccation of the bentonite in the GCL, it secures the barrier performance through all seasons. An additional bentonite layer is impregnated in the longitudinal edges of the roll, sealing up the overlap in longitudinal direction.

One of the main challenges in this project is the presence of many different building structures (i.e. bridge, piers, walls, etc.) along the lakeshore. The designer ensured with his design the proper connection of the structures to the GCL barrier system.

A total of 45.000m² of Bentofix® X was supplied to the project site with the assistance of our partner Shenzhen Silco Industrial Co. Ltd. The installation was completed in 2019, and the product has been performing well ever since.