

Case Study

Secutex® Soft Rock - Geotextile wall Lubmin, Germany

Coastal protection

- **Project name**
Geotextile wall Lubmin, Mecklenburg-Vorpommern, Germany
- **Executing contractor**
Colcrete - von Essen Wasserbau GmbH & Co. KG, Ueckermünde, Germany
- **Product**
Secutex® Soft Rock R 601





Fig. 1: Arrangement of the geotextile sand containers



Fig. 2: Installation of the geotextile sand containers

Challenge

At the seaside resort of Lubmin (Mecklenburg-Vorpommern, Germany), the storm surge in 2017 and two storm surges in 2019 led to a substantial decline of the dune due to erosion, so that short-term action was needed. Due to the cramped conditions on site, the State Office for Agriculture and the Environment (StALU) could not construct the coastal protection dune according to its intended cross-section. In case of an imminent complete erosion of the dune in the event of a storm surge, an additional construction had to take over the function as the last barrier against breakthrough.

Solution

The StALU quickly found a solution and used geotextile sand containers (GSCs) in the area that has to remain stable during a storm surge. After the sand had been removed, the geotextile sand containers Secutex® Soft Rock were placed. Stacked in an offset manner and inclined towards the land side, they form a so-called geotextile wall. Geotextile walls for dune reinforcement are covered by sand for most of their service life and appear natural. Only after severe erosion caused by one or more storm surges, the geotextile wall becomes visible again. After such a storm surge event, the dune is restored in its overall geometry and near-natural look.

Around 33,000 GSCs were installed to reinforce 1.8 kilometres of the dune along the coast of Lubmin. The executing contractor filled each container with one cubic metre of sand directly on the beach. A filled sand container weighs approx. 1.2 tonnes. The construction work was completed by the end of 2020.

Conclusion

The mayor in Lubmin reported that the geotextile wall made of sand containers is precisely the solution that the people of Lubmin have wanted for a long time. The residents are delighted with the coastal protection solution and are happy about the improved safety. Comparable coastal protection structures had already been realised in Rerik and Warnemünde, Germany.