

SUMMARY

Contaminated sediments have become a remarkable problem in harbours everywhere in the world. Process stabilisation technology is an environmentally safe and an economical way to solve this problem. This is a relatively new technology which has been tested for the first time in the full scale pilot of EU LIFE-STABLE in Turku harbour in 2008. Contaminated sediments can be stabilised with process stabilisation. The stabilised masses can be utilised in different types of soil construction applications, for example for harbour fillings. Different types of binder admixtures can be fed into the mixer unit of the process stabilisation system. The determination of the binder recipe is a very critical factor for a successful stabilisation process. The

environmentally, technically and economically best binder admixture has to be specified individually for each application and prevailing circumstances. Significant cost savings as well as other benefits can be obtained when using industrial by-products as components of the binder recipes.

The project has been carried out in co-operation with Port of Turku and LIFE-STABLE participants: Terramare Oy (dredging), Biomaa Oy (process stabilisation), Fortum Oyj (producer of fly ash), Regional Council of Southwest Finland (dissemination), and Ramboll Finland Oy (binder investigations, designing, quality control, environmental assessment).